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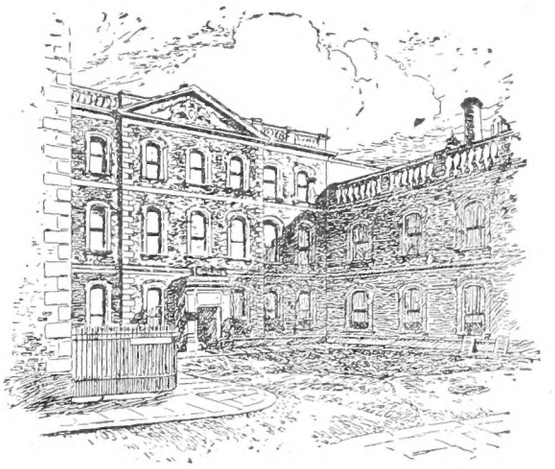
The Times

HISTORY OF THE WAR

VOL. IV.



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CONTENTS OF VOL. IV.

PAGE

CHAPTER LXV.

THE BATTLE OF YPRES (SECOND PHASE) 1

CHAPTER LXVI.

MEDICAL WORK IN THE FIELD AND AT HOME 41

CHAPTER LXVII.

THE SUBMARINE AND ITS WORK 81

CHAPTER LXVIII.

SIR JOHN FRENCH 121

CHAPTER LXIX.

THE LAST PHASES OF THE RUSSIAN WINTER CAMPAIGN 161

CHAPTER LXX.

WINTER ON THE WESTERN FRONT 201

CHAPTER LXXI.

WOMEN'S WORK IN THE WAR (I.) 241

CHAPTER LXXII.

THE FEEDING OF THE ARMY AND NAVY 281

CHAPTER LXXIII.

THE FIRST "INVASION OF EGYPT" 321

CHAPTER LXXIV.

TRENCH WORK AND TRENCH WEAPONS 361

CHAPTER LXXV.

NEUVE CHAPELLE 379

CHAPTER LXXVI.

THE RUSSIAN OFFENSIVE IN THE CARPATHIANS 401

CHAPTER LXXVII.

BELGIUM UNDER THE GERMAN YOKE: THE FOOD PROBLEM 441

CHAPTER LXXVIII.

THE BELGIAN REFUGEES 457

CHAPTER LXXIX.

WOMEN'S WORK IN THE WAR (II.) 481

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CHAPTER LXV.

THE BATTLE OF YPRES (SECOND PHASE).

Perilous Position of the 7th Infantry Brigade on October 24—Indian Troops Reinforce Smith-Dorrien—Battle of October 26; Brilliant Fighting of the 3rd Cavalry Division; Fighting at Neuve Chapelle; Gallant Conduct of West Kents—French Reinforcements Begin to Arrive—The IV. Corps Broken Up and Incorporated in I. Corps—Prince Maurice of Battenberg Mortally Wounded—Germans Storm Neuve Chapelle—Its Recapture by the Indians—Most of the II. Corps Brought Back into Reserve and Replaced by Indian Troops—Services of the III. Corps—The Germans Heavily Reinforced—The Kaiser's First Great Bid for Victory—The "Minenwerfer"—Battle of October 30; the I. Corps Driven Back Towards Ypres—Battle of October 31; Line of I. Corps Pierced at Gheluvelt; "The Most Critical Moment" of the Battle of Ypres; the Worcesters Retake Gheluvelt and Save the Day; Loss of Wytschaete and Messines; Charge of the London Scottish—Renewal of Battle on November 1; Germans Everywhere Repulsed—The French Offensive; Advance from Nieuport and Dixmude—Two Divisions of Prussian Guard Brought from Arras to Courtrai—Battle of November 10 and 11—Dixmude Stormed by Germans; Prussian Guard Routed by British—End of the Battle of Ypres.

IN Chapter LXII. the narrative of the Battle of Ypres was brought down to the evening of October 23. A Division of the French 9th Corps had just entered Ypres and taken over that portion of the line round Langemarck which had been occupied by Major-General Bulfin with a part of the 2nd Division of the I. Corps. It had been Bulfin's task on the 23rd to expel the Germans from the gap left by the defeat of the Cameron Highlanders between Bixschoote and Langemarck, and brilliantly had he accomplished it.

On Saturday, the 24th, when the Germans were across the Yser and the inundation of the fields on both sides of it was becoming more and more necessary to save the situation for the Allies, the Germans pushed hard against our line from Dixmude to La Bassée. The German 27th Reserve Corps was flung against the left wing, but how unsuccessfully may be surmised from the letter of a man of the 246th Reserve Regiment, one of the regiments in that Corps:

> On October 24 we were ordered to be ready for an assault before dawn. We had hardly advanced 500 yards when we were met by a terrific shell fire from the British. When we were collected again I found what an awful disaster had overtaken us. Of our battalion scarcely 80 men were left.

At 6 a.m. the 21st Brigade (part of the 7th Infantry Division), consisting of the 2nd Bedfordshire Regiment, 2nd Yorks Regiment, 2nd Royal Scots Fusiliers and 2nd Wiltshire Regiment, was attacked in the neighbourhood of Gheluvelt without any preliminary shelling. "At 7 a.m.," says Mr. Underwood,* "Captain

* An interpreter to the 21st Infantry Brigade.

Drysdale came up to me and asked me to get out on to the road to hurry up two battalions which were expected every minute from the 1st Army Corps coming to our support." The position was most critical. There was "not *one* man left to support the firing line, which was being very hardly pressed, and might give way at any moment." It was an anxious moment, but in a short time the eagerly expected reinforcements came up. "This," observes Mr. Underwood, "was the seventh day since we first engaged the Germans, our one Division extending over an unheard-of front of eight miles, and holding up what I understood from one of our prisoners yesterday to be a hostile force of three Army Corps." This was an exaggeration, as not all three Corps engaged the 7th Division, but that the British in the woods from Zonnebeke to Zandvoorde had been enormously outnumbered and outgunned is beyond doubt. They had had scarcely any sleep for seven days; they had never left the trenches, "fighting night and day, sticking to them until they were literally blown out of them or buried alive. They were now," Mr. Underwood adds, "becoming pieces of wood, sleeping standing up, and firing almost mechanically, with the very slightest support of our guns, which were now outclassed, as we had no howitzers with the Division."

On the road Mr. Underwood found Territorials and Northumberland Yeomanry in readiness to go into the trenches should the expected portion of the I. Corps not appear. Ten minutes later he sighted the head of a column swinging up the road. The Highland Light Infantry and King's Own Scottish Borderers were marching to relieve their worn-out comrades. They were doubled round the wood to the trenches, and the danger of the line being pierced at this point, as it had been pierced on the 23rd between Bixschoote and Langemarck, was averted.

South of Zandvoorde the 3rd Cavalry Division (Byng's), shelled, sniped, and attacked at close quarters, continued to hold the gap between Zandvoorde and the Comines-Ypres Canal at the Château de Hollebeke. Thence to St. Yves and the wood of Ploegsteert the line was held by the Cavalry Corps, supported by the two battalions of the Lahore Division of the Indian Expeditionary Force in Voormezeele and Wytschaete, with the remainder of the Ferozepur Brigade (less one battalion) in Wulverghem.

Together these troops beat off the attacks of the Germans who had crossed the Lys between Warneton and Pont Rouge and were seeking to capture the ridge of the Mont-des-Cats and to advance on Ypres through St. Eloi.

From the wood of Ploegsteert to the Lys the position on the 24th remained unchanged, but south of the Lys, round Armentières, several attacks were made on the III. Corps, each, thanks chiefly to our artillery, being repulsed with heavy loss. The brunt of the fighting on the 24th, as on the two preceding days, was borne by the 16th Brigade.

At La Boutillerie, on the road which from Fromelles on the Radinghem-Givenchy ridge descends to Fleurbaix, there was a brisk encounter. On the right of the III. Corps French Cavalry and the II. Corps were shelled all day. Towards evening a heavy attack developed against the 7th Infantry Brigade; it was repulsed by the Wiltshires and Royal West Kents with very heavy loss to the enemy. Later the Germans, moving on the 18th Infantry Brigade, drove the Gordon Highlanders out of their trenches, which were, however, recaptured by the Middlesex Regiment, gallantly led by Lieutenant-Colonel Hull. The 8th Infantry Brigade, which had been sent to prolong the left wing of the II. Corps, resting on Fauquissart, was also engaged. In all these cases the enemy was driven back, leaving large numbers of dead, wounded and unwounded prisoners behind him. Sergeant R. Willington, of the 2nd Yorkshire Light Infantry, in the course of the day performed an action by which he gained the Medal for Distinguished Conduct. At Richebourg L'Avoué, on the road from La Bassée past Neuve Chapelle to the Lys, the telephone line to the Brigade Headquarters had been broken by a bursting shell. It could not be repaired, and a message had at any cost to be got through to Headquarters. This brave man volunteered at once to cycle under heavy fire with the message along a road on which high explosive shells were bursting.

But good as were the men fighting here they could not resist indefinitely double or treble their numbers. In the first eight days of the fighting, as described in Chapter XLVI., which had followed their advance through villages which were miniature fortresses, across streams and ditches raked by machine guns, until they attained the Givenchy-Radinghem ridge, which commanded Lille and the Lille-La Bassée Canal, they had been opposed by considerably

superior forces. Now, when they had been driven back from it to the line Fauquissart-Neuve Chapelle-Givenchy, they had to withstand the assault of a body which, by the 31st, consisted of the 14th Corps, one or more divisions of the 7th Corps, a brigade of the 3rd Corps, several battalions of Jaegers, and four Cavalry Divisions. A vastly superior force, for the German 14th Corps alone, not reckoning the others, exceeded in numbers the II. Corps.

It is not, then, to be wondered at that by October 24, Smith-Dorrien's troops, after almost a fortnight's ceaseless marching, trenching, and continued actual engagement, were, as Sir John French expressed it, "becoming exhausted." Reassured by the arrival of the head of the French 9th Corps, which placed his centre and left temporarily out of danger, Sir John French sent to Smith-Dorrien's support the remainder of the Lahore Division under Major-General Watkis. It was stationed at Locon on the Béthune-Armentières railway, behind the centre of the II. Corps and west of the canal of the Lawe, which connects the Aire-Lille Canal with the Lys. The Ferozepur Infantry Brigade was, it will be remembered, round, or on, the eastern end of the ridge of the Mont-des-Cats. The Kaiser was soon to discover the value of the judgment of those of his officers who, when fighting by the side of the Indian troops in the Peking Expedition, had thought fit to speak of them as coolies.

Eastern troops had indeed been seen before in Europe, but they had come as destroyers. As late as 1683 the Turks had been before the walls of Vienna, which but for John Sobieski, King of that Poland dismembered in the eighteenth century by the rulers of Prussia and Austria and by the German woman then ruling Russia, on whom perhaps Byron pronounced the soundest judgment, would have fallen into their hands. But now, to save and not to destroy European civilization, came the soldier-representatives of that densely populated peninsula, where—two hundred and more years before Alexander crossed the Indus—Buddha had lived and taught.

On the 25th the remainder of the Lahore Division marched from Locon to the trenches round Neuve Chapelle, hitherto defended by the 7th Brigade of the II. Corps, and about the same time another Indian Brigade, Sir John French tells us, "took over some ground previously held by the French 1st Cavalry Corps."

Thus reinforced, the II. Corps during Sunday the 25th, the day when the inundations on the Yser started, hung on to the position from Givenchy down across the plain behind the stream of the Loyes to Fauquissart. At

AN UNDERGROUND BEDROOM IN THE TRENCHES.

Givenchy there was stubborn fighting, in which Sergeant H. Webb, of the 1st Devonshire Regiment, displayed great gallantry and won the Distinguished Service Medal. After the officers of his company had been killed or wounded he kept his men together for two or three hours and held his post in spite of the fact that his right flank was exposed to a severe fire. Among the officers wounded here was Lieutenant G. B. Ferguson Smyth, of the 17th Company Royal Engineers, who had his arm destroyed by a bursting shell. He was rewarded with a D.S.O. tor consistent skill, daring, and hard work in reconnaissance and defensive preparations by night and day throughout the campaign. And surely never was this distinction better earned.

The battle this day on the right of the Allies was mainly an artillery duel. In the centre, however, there were several hand-to-hand combats, and after dark, when the wind rose and the rain fell in torrents, the Leicestershire Regiment was driven from its trenches by shells which blew in the pits in which the men were covered, and the line was here pressed somewhat back. On the left wing, north of the Lys and east of the Comines-Ypres Canal, the 2nd Division of the I. Corps, with the French 9th Corps on its left and the 7th Infantry Division on its right, took the offensive from the arc Bixschoote-Zonnebeke-Zandvoorde, gained some ground, and captured a few

TESTING THE WIRE.

INSIDE THE MOVING TELEPHONE STATION

prisoners and guns. At 6.30 p.m. the Germans counter-attacked at one point, where a detachment of the Guards was stationed. The hostile troops were mistaken for British soldiers. Nor was the mistake discovered till they were within range of the bayonet. Then with a shout our men closed and thrust them back with the British soldier's pre-eminent weapon. Some two hundred, indeed, got through at a point where the trenches had been blown in, but betrayed by the light of burning houses they were soon disposed of.

The 26th was another critical day in this terrific struggle. In the night the Germans had tried to capture Dixmude by surprise, and during the day they made repeated efforts to seize the Dixmude-Nieuport railway embankment and Nieuport itself. The Belgian Staff had, indeed, retired from Furnes to Poperinghe. But at Nieuport the Belgian engineers were engaged on the work of inundating the area between the canal and the railway, destined so soon to have a decisive effect on the issue of the battle of the Yser.

Although the French and the British advanced north and north-east of Ypres, where the 1st Irish Guards were in action on the Reutel ridge, and south of Ypres the Cavalry Corps pushed back the enemy towards the Lys, still the balance on the day's fighting was in favour of the Germans. The 7th Infantry Division, which was to have supported the Cavalry Corps in its forward movement, could only by the most continued gallantry resist the violent attacks of the Germans, prepared by the shell-fire of a great mass of artillery. The 20th Infantry Brigade (1st Grenadier Guards, 2nd Scots Guards, 2nd Border Regiment, and 2nd Gordon Highlanders) was withdrawing north of Zandvoorde. To relieve the pressure

A FORTIFIED BLOCKHOUSE.
Germans with guns installed in a farmhouse.

on the 20th Brigade, the 7th Cavalry Brigade, in reserve behind the 6th Cavalry Brigade, which was holding the Zandvoorde-Hollebeke trenches, was ordered in the afternoon to push towards Kruiseik, a village east of Zandvoorde. This operation was brilliantly carried out by the Royal Horse Guards, commanded by Colonel Wilson. The leading squadron, under Captain Lord A. Innes-Ker, particularly distinguished itself, Trooper Nevin, among other soldiers, exhibiting remarkable gallantry. North of the 20th Brigade the 21st Infantry Brigade was moved to Veldhoek in support. Meanwhile the Germans had forced their way up the Menin-Ypres road and were across the Becelaere-Hollebeke road.

South of the Lys the enemy, moving in the evening through the woods, assaulted Neuve Chapelle and gained possession of a portion of the village, and the West Kents "gloriously upheld the traditions of the regiment."* It was not the first time that the 50th, the regiment in which Sir Charles Napier served, had distinguished itself in fighting against overwhelming odds. At Vimiera and in the conquest of the Punjab they had earned undying fame.

It also received the warm praise of the Army Corps commander, Sir Horace Smith-Dorrien. Two young officers, Lieutenant H. T. H. White and Second-Lieutenant J. R. Russell, received the D.S.O. for their conduct in handling the battalion after all the other officers had fallen. The experiences of this regiment on the 26th are vividly depicted by Captain R. G. M. Tulloch, who was that day wounded, in a letter published by the *Daily Telegraph*:

Beginning about 7 a.m., the Germans shelled slowly but methodically the area behind our support trenches, where reserves were thought to be, and then soon after midday fire was concentrated on the area of fire and support trenches. Considering the small area shot at the fire was terrific; no sooner was the débris from the explosion of one shell cleared when the next arrived, and at one time I reckoned they were falling at the rate of 100 an hour.

Everything was wrecked; the support trench was rendered impassable, as well as the communication trench, so that to reach the fire trench we had to double across 150 yards of open ground. Here the heavy fire helped us, as the smoke and débris from the bursting shells was so thick that men were often able to reach the fire trench unperceived by the machine-guns, which were trained into and fired at the area behind the fire trench in order to prevent supports coming up.

About 2 p.m., owing to several 6 in. shells having actually burst in the fire trench, wrecking parts of the trench and burying men alive, it was necessary to send up extra men with shovels to clear away the débris. Ten men volunteered for this job, and armed with two shovels each, raced for the fire trench. Luckily only one was hit, and then the work of digging out the entombed men began. No easy job was this, as owing to the parapet being wrecked and to a heavy machine-gun and rifle fire, to say nothing of 6 in. shells which were falling within a few yards of the trench, it was impossible to stand up to dig. As it was, three of the ten volunteer diggers were hit to my knowledge, and more may have been. Anyway, we dug out two men alive, which was a great satisfaction.

As the Germans were not yet coming on, the fire trench was left weakly held in order to avoid losses, but as soon as dusk fell extra men were pushed up into it by twos and threes. The fire of the enemy, however, still

MARCHING TO THE FRONT FROM THE BASE.

* Quoted from a telegram to the Regiment from General Forestier-Walker, whose grandfather had commanded it at Vimiera.

DISMOUNTED CAVALRY.

swept the area from the support to the fire trench, and in spite of the darkness many were hit.

At length the worst shrapnel shelling I have ever experienced was started. At one time shells were bursting at the rate of ten a minute, and dirt from the parapet was continually knocked all over the men. The only thing was to crouch under cover, and trust that the shelling would stop and allow of our men to look out before the actual infantry attack took place, which is what indeed happened. For myself, thinking I ought to take a peep into the night to the front, I incautiously put my head above the parapet, when a shell burst almost in my face, knocked me over, and rendered me useless for the rest of the fight.

With the centre of his II. Corps almost pierced, his III. Corps at points pressed back towards the Lys, and the 7th Infantry Division in the woods north of Zandvoorde rapidly becoming weak, Sir John French anxiously awaited the reinforcements which Foch and Joffre were sending to the Yser and Ypres. The French troops began to be motored and railed to the front as early as the 26th. The first instalments arrived on the 27th, and by November 11 there was available a total force of about "five army corps, a division of cavalry, a territorial division, and sixteen regiments of cavalry, plus sixty pieces of heavy artillery."*

The Germans were not reinforced till the 29th, so that to some extent the French leaders had anticipated the main effort of the Kaiser. Yet so vast was the force already opposed to the Allies that even with the new additions sent by Joffre and Foch there were none too many for the battle.

On October 27 Sir John French went to the headquarters of the I. Corps at Hooge and there personally investigated the condition of the 7th Infantry Division. The result of his inspection was that he broke up the IV. Corps, placed the 7th Infantry Division and the 3rd Cavalry Division under the command of Sir Douglas Haig and sent Sir Henry Rawlinson and his Staff back to England to supervise the mobilization of the 8th Infantry Division.

Sir Douglas now rearranged his troops. The

* Semi-official account condensed by Reuter.

A CAREFULLY CONCEALED HOWITZER SHELLING THE GERMANS.

THE LATE MAJOR THE HON. HUGH DAWNAY, D.S.O., 2nd LIFE GUARDS.

3rd Cavalry Division extended its left a little north of the Château east of Zandvoorde. The 7th Infantry Division was placed between it and the Menin-Ypres road. North of it to a point immediately west of Reutel was posted the 1st Division. The 2nd Division extended the line almost to the Moorslede-Zonnebeke road.

The readjustment was accompanied by a rearrangement of the three brigades of which the 7th Infantry Division was composed. The 21st Brigade was at once ordered to advance up the Ypres-Menin road, retake Gheluvelt and from Gheluvelt move to the trenches round Kruiseik, to replace the 22nd Brigade. This they did under heavy shell fire.

During the night the Germans attempted to surprise some of the trenches, and Prince Maurice of Battenberg was mortally wounded. The Battenbergs were hereditary enemies of the Hohenzollerns and had been treated by Bismarck and William II. with peculiar insolence. Prince Maurice was the grandson of Queen Victoria and the brother of the Queen of Spain. To his mother, Princess Henry of Battenberg, President Poincaré, on the 29th, sent the following telegram: "I had quite recently the great pleasure of seeing Prince Maurice in the midst of the splendid British troops, and to-day I learn that he has fallen on the field of honour. I beg that your Highness in this great trial will accept my sincere and respectful sympathy."

While the events described were occurring on the left wing, the German attack on Neuve Chapelle, where was the centre of the II. Corps, had been vigorously pushed. Against every salient point in the long line south of the Lys other attacks were directed to prevent troops being sent to retake the northern part of the village. Nevertheless, with some assistance from the III. Corps, Sir Horace Smith-Dorrien, during the morning and early afternoon, beat back the enemy and, after terrific hand-to-hand fighting in the houses, in which once more the British showed their superiority, drove the Germans to the edge of the village. The enemy would not however yield without a further effort, and sent heavy reinforcements forward. Descending from the ridge and crossing the stream of the Loyes, a whole division, in one huge column, regiment succeeding regiment, advanced once more against the brave defenders of Neuve Chapelle. But under the withering fire of the British rifles, and guns, the first three assaults failed. The fourth succeeded, and at night the entire village was once again in the possession of the foe. But not for long.

If the Germans could hold Neuve Chapelle they would be astride the main line of communication between the II. and III. Corps.

[*Bassano.*

THE LATE PRINCE MAURICE OF BATTENBERG.

PRESIDENT POINCARÉ VISITS SENEGALESE WOUNDED.

It was essential, therefore, that Neuve Chapelle should be retaken, and on Wednesday, the 28th, Smith-Dorrien again assaulted it.

The task was assigned to the 7th British Brigade, the 47th Sikhs, the 9th Bhopal Infantry, and two companies of the 3rd Bombay Sappers and Miners. The moment had come for which Lord Kitchener had prepared the Indian Army. The "armed might of the Empire was engaged in a life and death struggle." * The British Minister of War, when Commander-in-Chief in India, had been "struck with the readiness with which native soldiers of all ranks acquire a soldier-like bearing and learn such details of drill and military training as can be acquired mechanically." But would the Indians "when suddenly confronted with unexpected situations, become confused and helpless or what they themselves would term *gabrao'ed* ?" †

To train the Indians to meet European troops armed with repeating rifles, and supported by machine guns, quick-firing field artillery and howitzers had been the aim of Lord Kitchener and his successors. Their work was now to be tested. Shells burst over, among and round the Indians, and machine guns and rifles swept the road. "Unexpected situations," unlike any they had encountered in the border warfare of India, arose every moment. Over their dead and dying comrades they gained Neuve Chapelle, and stormed most of the houses in it. By nightfall the greater part of the village was again in the British possession, and, what was more important, Sir John French was convinced that the Indian contingent could replace British troops in the line of battle. In the next days, after the Meerut Division came up, the Indian Army Corps was substituted for the II. Corps. But two brigades and a large part of the artillery from the latter remained to assist the newly arrived troops. Two and a half battalions of these brigades were afterwards relieved by the Ferozepur Brigade withdrawn from Wulverghem, Wytschaete, and Voormezeele, where, since the 22nd, they had been supporting the Cavalry Corps.

The II. Corps had worthily maintained the record established by it at Mons, Le Cateau, and on the Marne and the Aisne. For eighteen days or so it had been engaged in driving the enemy from the network of villages between La Bassée and the Lys, in storming the Radinghem-Givenchy ridge, and then, when it had retired to the plain, resisting the attack of vastly superior numbers endeavouring to thrust it back to the Lys.

The success of the Allies in he battle of Flanders was, indeed, largely due to the

* "Correspondence regarding the Administration of the Army in India" (1905), p. 11.

† Indian Army Order No. 246, April 11, 1904, p. 7.

II. Corps and Sir Horace Smith-Dorrien. The services of the III. Corps and General Pulteney on the 27th, and on subsequent days, were no less meritorious. Heavily cannonaded, the III. Corps beat off several attacks with heavy loss to the enemy, but suffered severely itself. Well had it deserved the tribute paid to it in Sir John French's dispatch of November 20:

I am anxious to bring to special notice the excellent work done throughout this battle by the III. Corps under General Pulteney's command. Their position in the right central part of my line was of the utmost importance to the general success of the operations. Besides the very undue length of front which the Corps was called upon to cover (some 12 or 13 miles), the position presented many weak spots, and was also astride of the River Lys, the right bank of which from Frelinghien downwards was strongly held by the enemy. It was impossible to provide adequate reserves, and the constant work in the trenches tried the endurance of officers and men to the utmost. That the Corps was invariably successful in repulsing the constant attacks, sometimes in great strength, made against them by day and by night is due entirely to the skilful manner in which the Corps was disposed by its Commander, who has told me of the able assistance he has received throughout from his Staff, and the ability and resource displayed by Divisional, Brigade and Regimental leaders in using the ground and the means of defence at their disposal to the very best advantage.

"TAKE YPRES OR DIE!"

The courage, tenacity, endurance and cheerfulness of the men in such unparalleled circumstances are beyond all praise.

It was over a fortnight since the III. Corps from Hazebrouck had attacked the Germans defending the south-western end of the ridge of the Mont-des-Cats. Through Meteren and Bailleul it had moved to the north bank of the Lys, crossed the river, occupied Armentières and approached the suburbs of Lille. Yet though some progress had been made, Hazebrouck was still exposed to danger. On the 27th and 28th, Taubes flew over it and endeavoured to destroy by bombs the railways back to Amiens and Calais along which reinforcements and munitions for the Allies were being transported to the front.

North of the Lys nothing of particular moment occurred on the 28th. The advance of the day before made by Sir Douglas Haig towards and along the Wervicq-Westroosebeke road had not been continued. About 2 p.m. one of the British aeroplanes came back from over the German lines, followed by a continuous fire of shrapnel. It was a grand sight to see the gallant pilot continue steadily onwards towards our lines through the numerous balls of white smoke which showed where the shrapnel were bursting round him.

The Germans had at this time gained some advantage, for Gheluvelt and Zandvoorde were set on fire by their shells, and Becelaere, notwithstanding our efforts, remained unrecovered. And now a wireless message was intercepted announcing that the British would be attacked the next morning.

A graphic entry in the diary of Corporal A. J. Sproston, the motor-cyclist, will help the reader to realize the situation round Ypres a few hours before the Kaiser made the first of his two great bids for victory:

October 28.

Near Zonnebeke, a village occupied by the Germans a couple of days back, houses and farms on the road are converted to piles of blackened bricks and stones. The tower of the pretty village church is reduced to ruins and gaps are prominent in the roof as a result of shell fire.

The fight is being waged furiously, not only by us but by the French on our left and right; and frequently going forward I steer my machine carefully between the dead cattle and note the dead of the French and Germans in ditches at either side of the road. Towards the close of this beautiful autumn day we returned to Hooge and at almost midnight I ride to Vlamertinghe viâ Ypres over a clear road illuminated by a glorious and nearly full moon.

Ypres, without the heavy rumbling of military wagons and the sharp clatter of horse's hoofs upon the pavé, is a silent city seemingly unconscious of the horrors surrounding. Hundreds of grey, travel-stained automobiles are lined up in the quiet streets awaiting that

GERMANS AT CHURCH SERVICE.

dawn that is to be the sign for them of the beginning of another day's relentless activity.

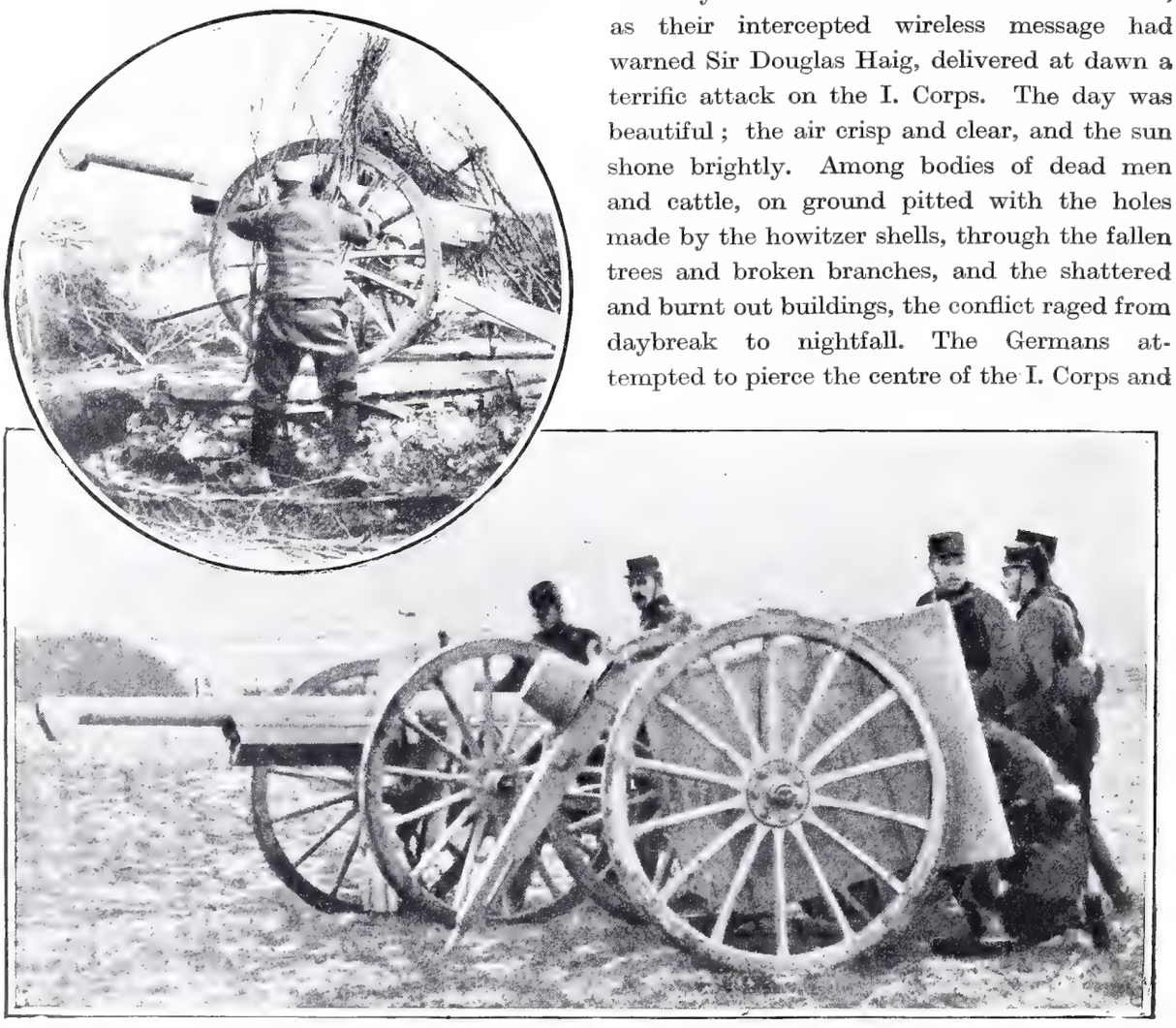
The hundreds of "grey, travelled-stained automobiles" seen by Mr. Sproston formed part of that fleet of vehicles stretching back over 100 kilometres of road engaged in bringing up French reinforcements to the battle area.

The French reinforcements did not arrive a moment too soon. The Kaiser was preparing to throw against the Allies north of the Lys the equivalent of another army. The 18th, 15th, 6th, and 13th, and a Bavarian Reserve Division under the command of General von Fabeck and General von Deimling were to help the Duke of Wurtemberg and the Crown Prince of Bavaria to storm the Allied trenches, capture Nieuport, Furnes, Dixmude, Poperinghe, Ypres, the ridge of the Mont-des-Cats, and the line of the Lys, and then, wedging in between Maud'huy's Army and the Anglo-Franco-Belgian Army to its north, sweep the latter into the sea and gain possession of the Channel ports. In the language of the Crown Prince of Bavaria addressing his troops, it was their business not to let the struggle with their most detested enemy drag on longer; a decisive blow must be struck. Struck it certainly was, but the German sword on this occasion was shattered on the steel wall which met it.

To increase the psychological momentum of his hosts the Kaiser himself proceeded to the front. He intended to hurl over half a million men at a line measuring now about 60 miles long. The attack was to be supported by a huge mass of artillery and a large proportion of the 50,000 machine guns with which the Germans had entered on the war.

On the 29th the Duke of Wurtemberg had ten or eleven divisions of infantry across the Yser—one was on the western rim of the fast rising flood. The great struggle for Nieuport, Ramscappelle, Pervyse and Dixmude was nearing its climax.

South of Dixmude, to ease the pressure on Ronarc'h's Marines and the Belgians, the French in their turn crossed the Yperlee Canal at the Nordschoote bridge and advanced on Luyghem and Mercken. From Bixschoote eastward to Passchendaele they also made headway. On the other hand the Germans, as their intercepted wireless message had warned Sir Douglas Haig, delivered at dawn a terrific attack on the I. Corps. The day was beautiful; the air crisp and clear, and the sun shone brightly. Among bodies of dead men and cattle, on ground pitted with the holes made by the howitzer shells, through the fallen trees and broken branches, and the shattered and burnt out buildings, the conflict raged from daybreak to nightfall. The Germans attempted to pierce the centre of the I. Corps and



A HEAVY FRENCH FIELD GUN.

A SOLDIER'S STRAW HUT IN THE FOREST.

to capture the point—a mile east of Gheluvelt—where the Wervicq-Westroosebeke road crosses that from Menin to Ypres. The 2nd Yorks Regiment (21st Infantry Brigade), probably on orders from a German disguised as a British officer, suddenly retired from their trenches in the woods towards the Gheluvelt-Menin road, just as the 2nd Gordon Highlanders nearer Gheluvelt were advancing. Finding that their flank was exposed by the retreat of the Yorks, the Gordons halted and then went back down the road towards Gheluvelt. It was one of those situations in war which might have ended in a panic.

While he himself galloped off to stop the Gordons from retiring farther, General Watts sent Mr. Underwood to help rally the Yorks. Under terrible shrapnel fire the men were formed up along the Zandvoorde-Gheluvelt road. "We tumbled them into the ditches alongside the road," says Mr. Underwood, "and it was a pitiable sight to see the poor fellows who were still in the open and badly hit trying to crawl along to take shelter from the hail of shrapnel bullets. They dragged themselves along, some with arm or leg shot off and others streaming with blood from head and face wounds." The shell fire died down and then the Yorks went forward again, accompanied by their machine guns, and speedily retook the trenches.

The Gordons, led by Lieutenant J. A. O. Brook, had also recovered the ground they had lost. But this brave and able young officer did not live to receive the V.C. awarded him for his gallant conduct at this juncture. By his marked coolness and promptitude he had prevented the enemy from breaking through the British line at a time when a general counter-attack could not have been organized.

Meantime Byng, with the 3rd Cavalry Division, directed his 7th Brigade to dismount and recover some trenches lost the night before between Kruiseik and the cross-roads. The 6th Cavalry Brigade, in like formation, supported the attack, and in turn was assisted by covering fire from the 7th Cavalry Brigade trenches. Our massed machine guns wrought terrible execution on the densely packed German battalions. About 2 p.m. the enemy began to give way; by dark the hill at Kruiseik had been recaptured, and the 1st Brigade had re-established most of the line from the Menin-Ypres road to Zonnebeke. Near Zandvoorde, Private F. Neville, of the 15th Hussars, had won his medal for Distinguished Conduct. In obtaining valuable information regarding a German observation post, he and his horse were knocked over by a high explosive shell. Twice afterwards that day he carried messages over dangerous ground.

About 6 p.m. the rain began to come down heavily, and during the night which was "black as ink," there was a terrific storm, which did not, however, put out the fires in Gheluvelt, or prevent a considerable amount of fighting

[Lafayette. [Elliott & Fry. [Lafayette.

1. MAJOR-GENERAL C. T. McM. KAVANAGH, C.V.O., C.B., D.S.O. 2. BRIG.-GENERAL THE EARL OF CAVAN. 3. MAJOR-GENERAL COUNT GLEICHEN, K.C.V.O., C.B., C.M.G., D.S.O.

on the Gheluvelt-Menin road. Taking advantage of the storm, the Germans came forward from the Pont Rouge-Warneton-Comines line, and assaulted Le Gheir and the Wood of Ploegsteert, at the same time attacking the Cavalry Corps between St. Yves and Hollebeke. At all points they were driven back.

South of the Lys the III. Corps had a new experience. Trench mortars (*Minenwerfer*) had been launching bombs loaded with high-explosive with a bursting charge of over 150 lbs. against the British trenches. Imagining that the nerves of the defenders had been shattered by these novel projectiles, the line was attacked, about midnight, in two places. The British shell fire kept off the enemy at one spot, at the other—south of Croix Maréchal—the 19th Infantry Brigade had to defend itself with the bayonet. No less than twelve battalions were employed in this attack, which was intended to lead to the capture of Armentières. A portion of the trenches held by the Middlesex Regiment was lost, and it was not till some hours later, when reinforced by a detachment from the Argyll and Sutherland Highlanders from Armentières, that they regained their lost ground. All the enemy in the trenches were bayoneted or made prisoners.

Away on the right wing the enemy, during the day, had made several charges on the Indians and the brigades of the II. Corps left with them. A trench was lost, then recaptured. The intensity of the struggle may be gauged by the fact that in front of one battalion alone the Germans left over six hundred dead and wounded.

Near Festubert, a village a mile and a half to the north-west of Givenchy, on the extreme right of the line, Lieutenant James Leach and Sergeant John Hogan, of the 2nd Battalion of the Manchester Regiment, of their own initiative recovered a trench after two attempts to retake it had failed. They both received the V.C.

Any lingering doubt that may still have existed in the minds of Joffre and Foch as to the desperate nature of the struggle between La Bassée and the sea must have been allayed by the fighting of the 29th. Orders had been given to General de Maud'huy and General de Castelnau to resume the offensive so as to retain as large a force as possible of the enemy south of the Béthune-La Bassée-Lille Canal. The attacks made by Maud'huy and Castelnau, the latter of whom stormed Quesnoy-en-Santerre the next day (October 30), prevented the Kaiser from swelling still further his enormous forces north of the Lys. This was in our favour. The battle of Ypres would not have been irretrievably lost until the Germans had taken the ridge of the Mont-des-Cats, but had the 2nd Corps and the Divisions of the Prussian Guard, which at a later date were sent to the Lys, arrived by October 30, the additional force might have turned the scale against us. During the 30th and the 31st a continuous stream of French troops poured through Ypres itself. It was time, for our men were exhausted by incessant fighting. The part played by the French in the Battle of Flanders will be better appreciated when the French War Office permits the publication of full particulars of the French fighting there. They lost, it is credibly believed, the prodigious number of 77,000 men.

On the morning of the 30th, the British Army, with its left wing extended to Zonnebeke and its right to the west of Givenchy, faced south-east, and held a position of about 30 miles. From Zonnebeke the I. Corps was arranged

career when, instead of manœuvring against his enemy's flanks, he took, as Davout said, "the bull by the horns."

There were two alternatives open to the Kaiser. One was to strike his hardest at the III. Corps, the Indian Expeditionary Corps, and the II. Corps, the other to pierce the centre. The latter appeared to be the more promising. If Ypres and Poperinghe could be taken and the ridge of the Mont-des-Cats stormed, the right of the Franco-Belgian Army on the Yser would have been turned and cut off from the left wing of the Allies. Then, with the motor-traction at his disposal and over the railway Roulers-Don-La Bassée, a large portion of the victorious army might be rushed south of the Lys against the III. Corps, the Indian Expeditionary Force, and the II. Corps. Granting success, the Germans might push westwards towards Boulogne and cut the land communications of the whole of the Allied Army engaged in the Battle of Flanders.

The network of canals and the exposed character of the country between the Yser and Dunkirk made it objectionable to deliver the main attack against the Allied left. The centre of the Allies, on the other hand, had neither the Lys nor innumerable dykes and ditches in front of it, while the Forest of Houthulst and the belt of woods to the south and east of Ypres afforded cover for the advancing columns. The Forest was entirely in the possession of the Germans, and they had already penetrated into the outskirts of the Wytschaete-Hollebeke-Zonnebeke woods, and both sides of the Comines-Ypres Canal up to and beyond Houthem were occupied by them. The line of the Lys from Pont Rouge to Menin and eastwards was theirs, and there was, therefore, no serious obstacle between them and Ypres.

The belt of woods to the east of Ypres and between the Ypres-Comines Canal and the Menin-Ypres highroad is thickest between Hollebeke and Gheluvelt. To approach those woods, from which the final assault might be launched on Ypres, it was necessary to dislodge the 3rd Cavalry Division from the ridge of Zandvoorde. If this could be accomplished the position of the portion of the I. Corps posted on the hill of Kruiseik would become untenable, while the Germans from Zandvoorde and Becelaere might attack Gheluvelt by the Becelaere-Gheluvelt-Zandvoorde road.

Accordingly at daybreak the German artillery deluged the Zandvoorde trenches with high-explosive shells and shrapnel. The fire is described by even our cool-headed soldiers, who never err on the side of exaggeration, as "terrific." The 7th Cavalry Brigade, which that morning were in the front line, despite the fact that many of the trenches were blown in, clung desperately to the position. But the whole German Active 15th Corps had been added to the already very superior forces facing the thin string of dismounted horsemen, and even with the support of the 6th Cavalry Brigade and the artillery it was impossible for them to hold on with such odds against them. Eventually the 7th Brigade withdrew through the reserve trenches, occupied by the 6th Brigade, to the Klein-Zillebeke ridge and the woods along it. To Byng's assistance General Allenby sent the Scots Greys, the 3rd and 4th Hussars.

The enemy, who hoped to be in Ypres that very evening, pressed on. Supported by their powerful artillery, they attacked Byng's Division again and again. The Château de Hollebeke on the east side of the canal, in the defence of which Sergeant P. H. McLellan and Private D. Moir, both of the 1st Royal Dragoons, showed conspicuous coolness and courage, had to be abandoned. The 6th Cavalry Brigade with the Greys and the 3rd Hussars on their left and the 4th Hussars on their right, however, held firm. Three men of the 3rd Hussars and a trooper of the 4th Hussars that day won the Medal for Distinguished Conduct. These were Corporal A. A. Page, Lance-Corporal J. Enticott and Bandsmen A. R. Hodson and T. Frere. They had shown great gallantry under a hail of howitzer shells. At dusk Byng's Cavalry, the Greys and Hussars were relieved by the 4th Infantry Brigade under Lord Cavan. It consisted of the 2nd Grenadier Guards, the 2nd and 3rd Coldstream Guards and the Irish Guards.

Meanwhile west of the Comines-Ypres Canal the 2nd Cavalry Division had been attacked with equal fury, especially in the trenches round Hollebeke defended by the 3rd Cavalry Brigade. There Sergeant A. J. Cobb and Lance-Corporals A. H. Smart and J. Colgrave, of the 5th Lancers, fought heroically. Smart, shot through the mouth and shoulder, continued to work his machine gun, and Colgrave rallied several bodies of Indians who had lost their officers. It was at this point that Khudadad Khan, a Panjabi Musulman of the Mehr

class, from Chakwal in the Jhelum district of the Punjab, won the Victoria Cross. He was the first Indian to gain that distinction. He belonged to the 129th Duke of Connaught's Own Baluchis, one of the two regiments of the Ferozepur Brigade (the other was the 57th, the well-known Wilde's Rifles) which had been sent by Sir John French to the support of the Cavalry Corps. He was in the machine-gun section. The British officer, Captain R. F. Dill, in command of it, had been badly wounded, but, under Colour-Havaldar Ghulam Mahamad, it kept on firing. Finally a column of the Germans, regardless of loss, rushed the gun and the entire detachment was bayoneted except Khudadad Khan, who, although severely injured, managed to escape. He did not quit the gun till he had rendered it useless.

At 1.30 p.m. the 3rd Cavalry Brigade, overborne by the weight of men and guns, was forced back. Allenby was obliged to weaken the 1st Cavalry Division defending the all-important line from the Wood of Ploegsteert to Messines by withdrawing from it the 2nd Cavalry Brigade less one regiment. It was placed at a point between Oostaverne and St. Eloi on the Warneton-St. Eloi-Ypres road in support of the 2nd Cavalry Division. As a heavy infantry column was advancing on Messines, and the two Indian battalions with Allenby were now very exhausted, Sir John French directed General Shaw with four battalions of the II. Corps to cross from the south to the north bank of the Lys and proceed with the London Scottish to Neuve Eglise, south-west of Wulverghem. From Neuve Eglise these reinforcements might also be sent to defend the banks of the Douve or the Wood of Ploegsteert. That evening the line of the 11th Infantry Brigade (III. Corps) near St. Yves, at the north-eastern edge of the Ploegsteert Wood, was actually broken, but fortunately Major Prowse with the Somerset Light Infantry by a counter-attack restored the situation.

On the night of the 30th a strong German attack on Messines was beaten off. At one point, indeed, they succeeded by sheer force of numbers in penetrating the line, but a lively counter-attack with the bayonet drove them headlong back.

The enemy advancing up the canal had reached a point less than three miles from Ypres, and was preparing to attack the end of the Mont-des-Cats ridge at Messines and Wytschaete, turn the ridge on the south by the Ploegsteert Wood and the Neuve Eglise-St. Yves ridge, which would afford a position or screen for his artillery, whence it could shell Messines and the high ground to the west of it. The main road connecting Ypres with Armentières, where was the centre of the III. Corps, passes through Messines. The Germans had already gained the edge of the last line of trenches holding together the Allied forces from the sea to La Bassée. The fire of their artillery came nearer and nearer. The night before a shell from a German battery had fallen into Ypres itself. During the evening of the 30th more shells descended on the city. One ripped to shreds the interior of a motor-car and mangled the chauffeur, who was sleeping inside it, another fell among French troops resting in a building, and killed and wounded many of them.

The attack from the south and south-east had, therefore, fulfilled the Kaiser's expectations. The Germans on the Zandvoorde ridge in front of the Klein Zillebeke ridge threatened

ON THE TRAIL OF WAR.

A PROTECTED MOTOR CROSSING A RIVER.

the right flank and rear of Sir Douglas Haig's position. When the British commander heard of the retreat of Byng's Division he had ordered that the line from Gheluvelt to the Comines-Ypres Canal should be held at all costs. The 2nd Brigade was placed in rear of it, one battalion being posted in the woods a mile south of Hooge as a reserve. At night General d'Urbal sent three battalions and a Cavalry Brigade of the French 9th Corps to the neighbourhood of Klein Zillebeke. "Orders were issued," says Sir John French, "for every effort to be made to secure the line then held and, when this had been thoroughly done, to resume the offensive."

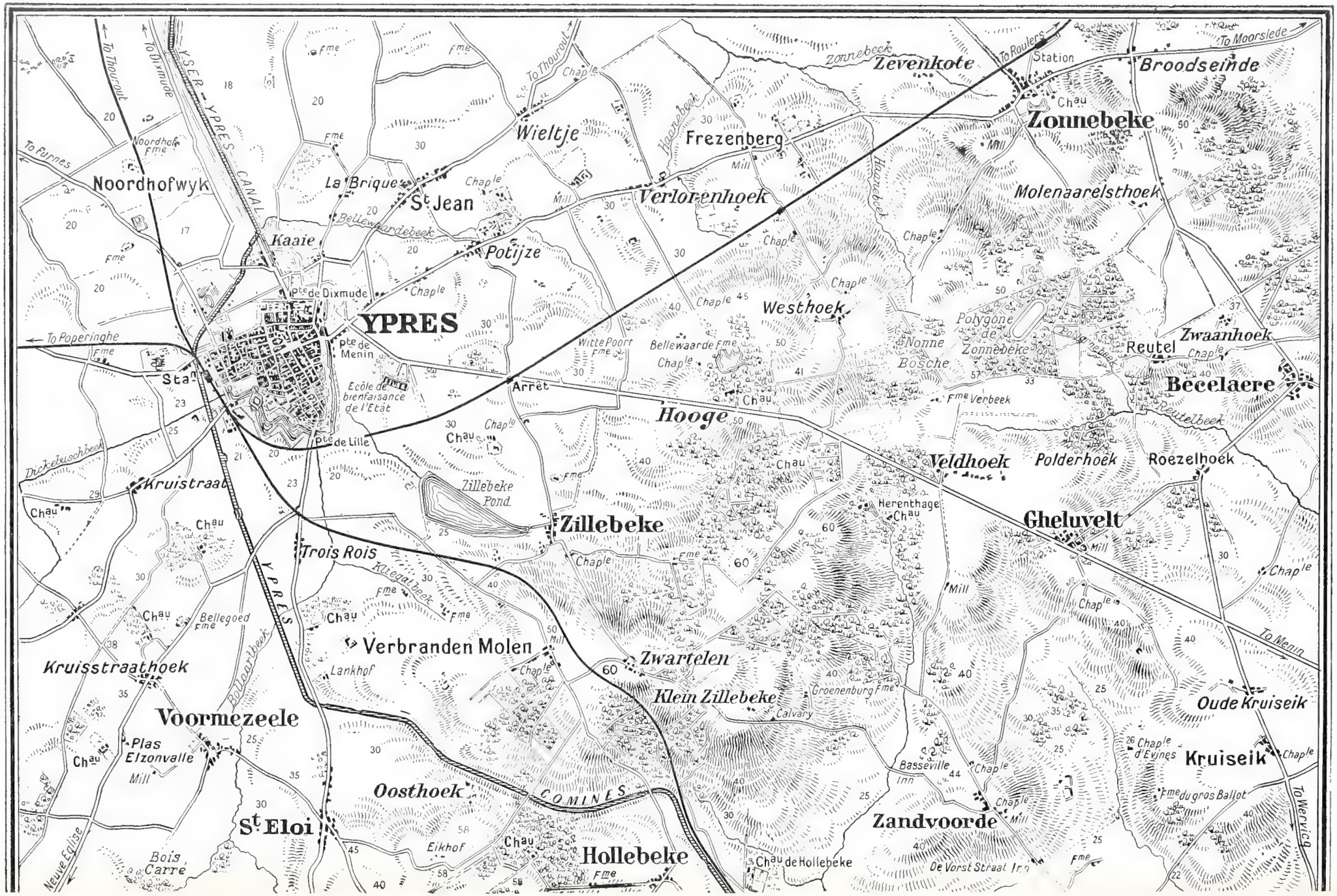
From Zandvoorde through Gheluvelt to Zonnebeke there had been no intermittence in the struggle. The 1st Battalion of the Royal Welsh Fusiliers, commanded by Lieutenant-Colonel H. O. S. Cadogan, between Zandvoorde and Gheluvelt, had lost two-thirds of its effectives, but two attacks on other parts of the trenches of the I. Corps were brought up by the entanglements in front of the trenches and by the infantry fire of the troops stationed in them. The French from Zonnebeke to the Yperlee Canal west of Bixschoote fought all day with varying fortune, and by nightfall they had recovered Bixschoote and pushed towards Passchendaele. They also crossed the Yperlee Canal and moved towards the western border of the Forest of Houthulst.

On the Yser the Germans, however, captured Ramscappelle and were in places beyond the railway embankment. Furnes as well as Ypres seemed within the Kaiser's reach.

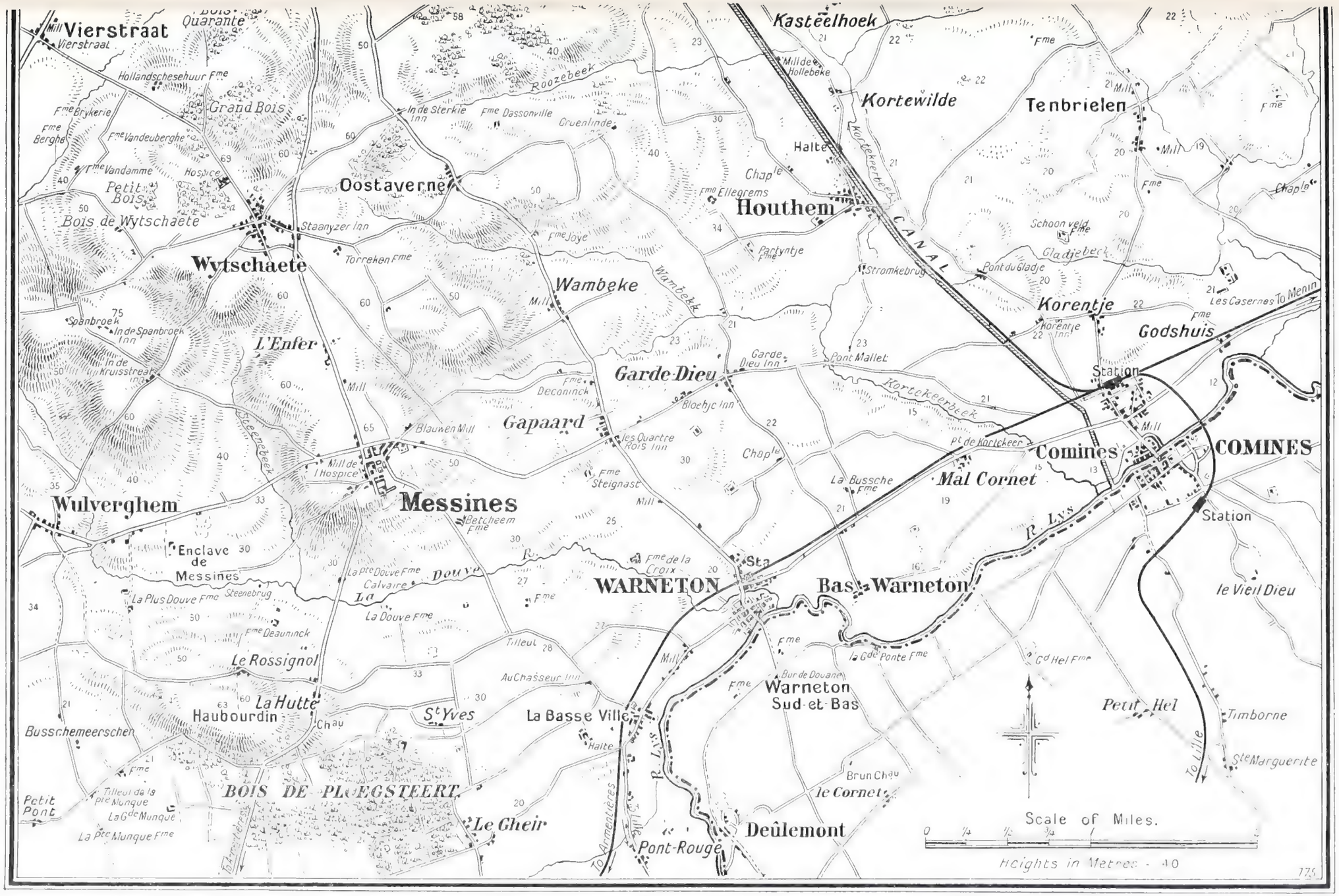
South of the Lys the enemy heavily bombarded the III. Corps, and so many shells fell in the Armentières region that the telephone wires were frequently cut. There was a renewal, too, of the efforts of the enemy against the Indian Expeditionary Corps and the supporting detachment of the II. Corps. Beyond La Bassée the Army of General de Maud'huy advanced on Vermelles, south-west of La Bassée, while General de Castelnau's forces stormed Quesnoy-en-Santerre between the Somme and the Oise.

Saturday, October 31, will be for ever memorable in the annals of the British Army and Empire. It was, perhaps, the most critical of all the days of the Battle of Flanders. Under the murky grey sky the Germans on the Yser and round Ypres made an extraordinary effort to end to their advantage the frightful struggle which had been going on for over a fortnight.

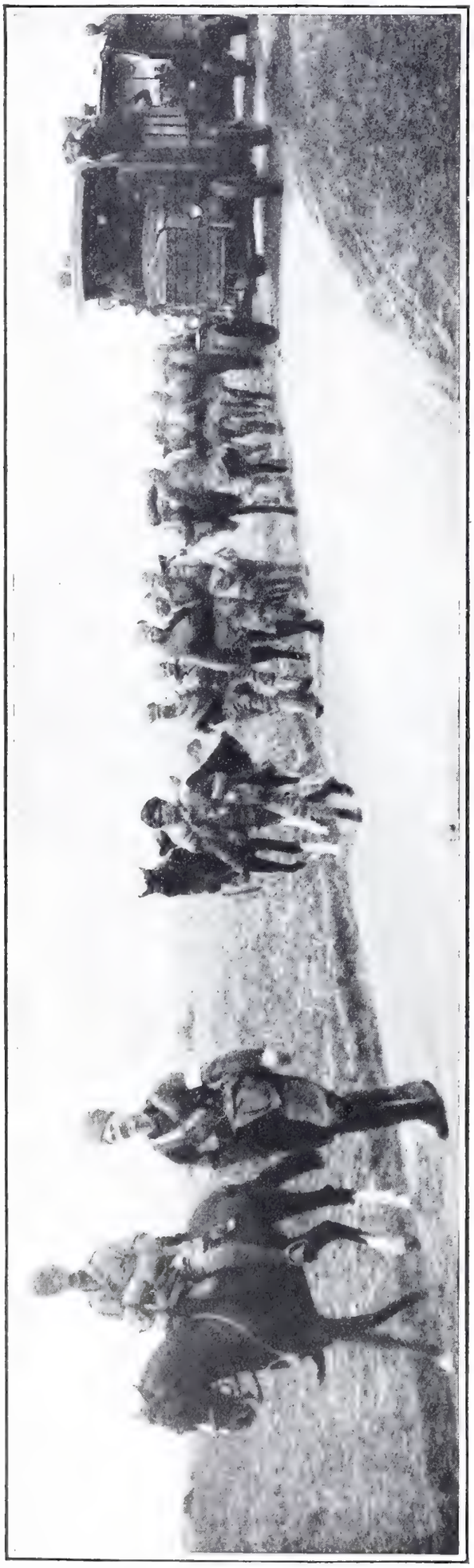
On the left wing the morning was signalized by our victory of Ramscappelle described in Chapter LXIII., p. 480. The French and Bel-



YPRES
Noordhofwyk
Kaaie
La Brique
St Jean
Wieltje
Potijze
Frezenberg
Verlorenhoek
Zevenkote
Zonnebeke
Broodseinde
Molenaarelsthoek
Westhoek
Polygone de Zonnebeke
Nonne Bosche
Reutel
Zwaanhoek
Becelaere
Hooge
Veldhoek
Polderhoek
Roezelhoek
Gheluvelt
Zillebeke
Zillebeke Pond
Trois Rois
Verbranden Molen
Zwartelen
Klein Zillebeke
Oude Kruiseik
Kruiseik
Voormezeele
Kruisstraathoek
Plas Elzonvalle
Oosthoek
St Eloi
Hollebeke
Zandvoorde
Bois Carré
Neuve Eglise
Kruistraat
Dickebuschbeek
Bellewaardebeek
Kliegatbeek
Bollaartbeek
Haanebeek
Reutelbeek
Zonnebeek
Polygonebeek
Wittepoort
Bellewaarde
Arrêt
Ecole de bienfaisance de l'Etat
Pte de Dixmude
Pte de Menin
Pte de Lille
Pte de Lille
Noordhof
Bellegoed
Lankhof
Eikhof
Herenthage
Groenenburg
Calvary
Basseville Inn
De Vorst Straat Inn
Chau de Hollebeke
Chau
Chaple
Mill
Fme
Station
To Thourout
To Dixmude
To Furnes
To Poperinghe
To Roulers
To Moorslede
To Menin
To Wervicq
YSER - YPRES CANAL
YPRES COMINES



MAP ILLUSTRATING THE BATTLE OF YPRES.



INDIAN TRANSPORT—MULES AND MOTOR WAGGONS.

gians by a magnificent charge expelled the Germans from the Dixmude-Nieuport railway embankment, recovered Ramscappelle and drove the broken, flying enemy into the flooded area between the railway and the Yser. Henceforward to the end of the Battle of Flanders the operations on the lower Yser consisted only of half-hearted engagements round Nieuport and Dixmude and the battle of the Yser becomes definitely merged in the more serious fighting known as the battle of Ypres.

South of Dixmude, between Luyghem and Passchendaele, the French continued their offensive of the day before, and by evening they were approaching the Forest of Houthulst and were around Poelcappelle.

From the sea to Zonnebeke the day had gone very favourably for the Allies. Their extreme left on the Yser was at last safe and it seemed possible that the powerful French offensive south of Dixmude might end in the reoccupation of Roulers. But, while these movements were in progress, the Kaiser made a most violent effort to crumple up the British line in the trenches between Zonnebeke across the Comines-Ypres Canal to the ridge of the Mont-des-Cats, and to take Ypres, which put a somewhat different complexion on the contest.

Sir Douglas Haig had disposed his 2nd Division from Zonnebeke through Reutel to Gheluvelt. Behind its centre was a mass of woods—the Polygone de Zonnebeke—some 2,000 yards long west to east by 1,000 yards wide north to south. A wood 500 yards west to east by 1,000 yards north to south extended the Polygone de Zonnebeke southwards almost to Gheluvelt.

The 1st Division (General Lomax's) held Gheluvelt and the Menin Ypres road. South-west of the 1st Division was what remained of the 7th Division (General Capper's) defending the long, narrow wood, 3,000 yards north to south from Veldhoek, which is west of Gheluvelt, to the neighbourhood of Zandvoorde. Behind the Veldhoek end other woods on both sides of the Menin-Ypres road stretched back to Hooge, which is about two miles east of Ypres. From the southern end of the woods the country to Ypres was wooded as far back west as the neighbourhood of the village of Zillebeke, which is a little nearer to Ypres than Hooge. South and west of Klein Zillebeke, which is on the road from Zillebeke to Zandvoorde, were woods to the north of the

GURKHAS TO THE FRONT!

canal.* West of the line Verbranden Molen-Zillebeke-Hooge it was open country right up to the old dismantled ramparts of Ypres.

The 22nd Infantry Brigade (General Lawford's) was on the right of the 7th Division, and to its right was General Bulfin's Brigade (the 2nd), with a battalion posted in the Hooge Woods. The Klein Zillebeke trenches as far as the north bank of the canal were held by Lord Cavan with the 4th Infantry Brigade and by General Moussy with three French battalions and a Cavalry Brigade.† At 8 a.m., Byng, with the 3rd Cavalry Division, was sent to the vicinity of Hooge to form a mobile reserve for the I. Corps. Shortly after 9 a.m. Allenby informed Byng, whose transport had been heavily shelled while passing through Zillebeke, that the Cavalry Corps west of the canal was being violently attacked, and Byng at once sent off the 7th Cavalry Brigade to his assistance. This reduced the available reserve for the I. Corps to the 6th Cavalry Brigade only.

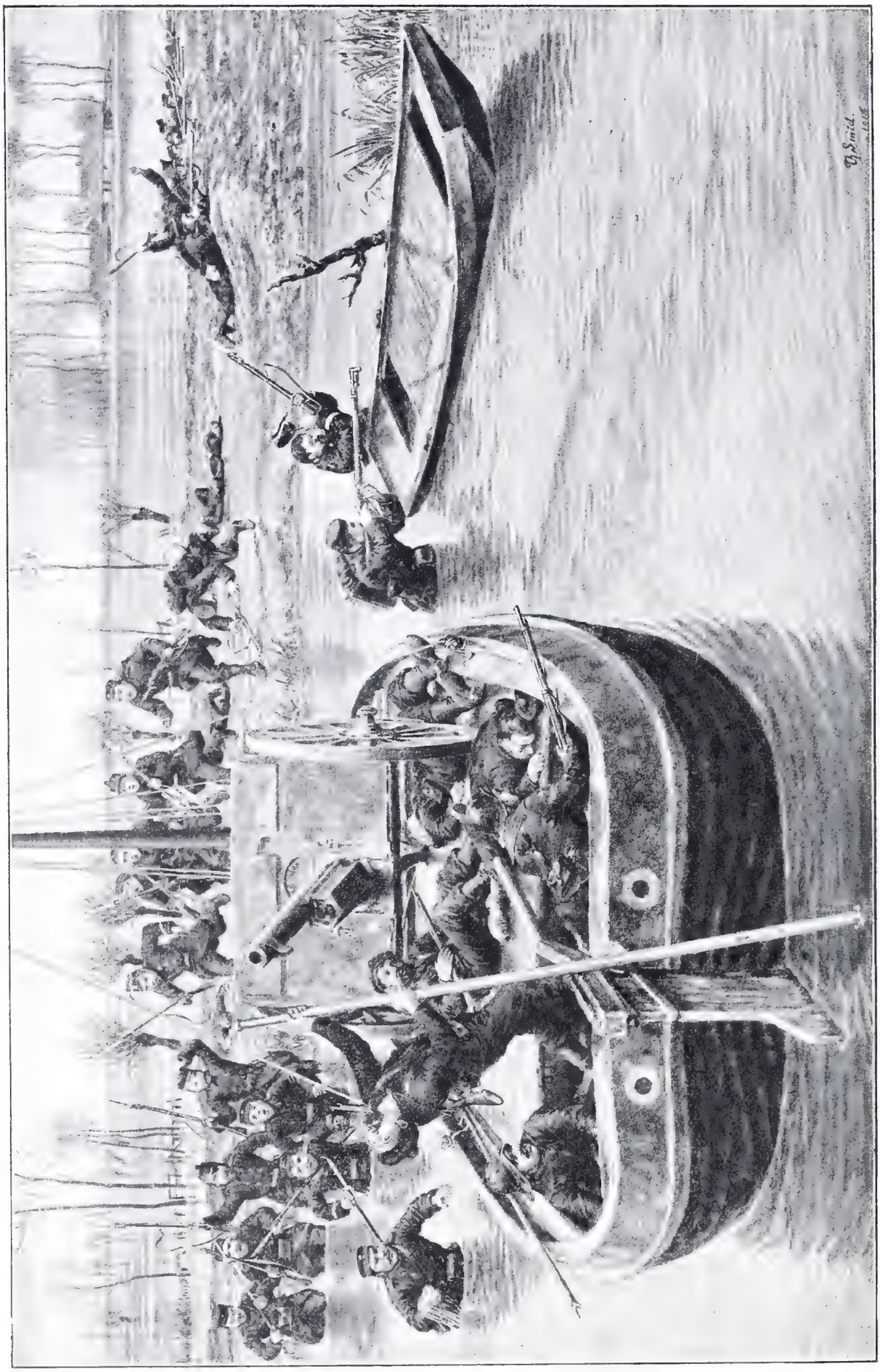
Thus the five or six miles of trenches from Zonnebeke to the canal were protected only by three sorely tried and depleted British Divisions, three battalions of French infantry, two brigades of Cavalry, and an artillery very inferior in number to that of the Germans.

Since the loss of the Zandvoorde ridge and the Château de Hollebeke on the preceding day had exposed Gheluvelt to an attack from the south as well as from the east, General Moussy advanced early in the morning with the French troops along the east bank of the Ypres-Comines Canal to recover the Château and the lost trenches on the Zandvoorde ridge. The Germans, however, were in such force that Moussy was soon reduced to the defensive.

Reassured as to his left wing, General von Deimling, the German Commander entrusted with the attack on Haig's Corps, sent column after column against Gheluvelt. Each attack was prepared by a hailstorm of high-explosive and shrapnel shells. At the same time to prevent Sir Douglas reinforcing the 2nd Welsh Regiment in Gheluvelt, the trenches north and south of them were battered with shells and charged by infantry. All through the morning attack and counter-attack succeeded one another in rapid succession, Von Deimling replacing the defeated columns by masses of fresh troops, whereas Haig had to use over and over again the same units. Gheluvelt became a heap of blazing ruins. The British trenches, searched

* The woods were mostly Spanish chestnuts, beeches, and Austrian pines

† It will be remembered (see ante, vol. I., p. 449) that the 2nd Division consisted of the 4th, 5th and 6th Brigades.



FRENCH SUCCOUR FOR BRAVE ALLIES.
Ronarc'h's Marines take a gun across the Ypres Canal to help the Belgians.

from end to end by howitzer fire, fell in and buried many of the men defending them. Shells were directed on every point behind the Allies' line as far back as Hooge and Zillebeke wherever the German aeroplanes signalled the presence of supporting troops. Thicker and thicker in front of the trenches became the carpet of grey-clad German dead and wounded, mown down by rifle or machine gun fire. Over it advanced time after time fresh German masses, only to be crushed in their turn by the steady fire of the unflinching British. The ground in front became a mere shambles piled up with the dying or dead.

The Allies recognized the issue at stake. If the I. Corps gave way the flank and rear of their gallant French comrades fighting between Zonnebeke and Bixschoote would be exposed. On their right the thunder of the German guns and the incessant crackle of their musketry told Haig's and Moussy's men that the Kaiser's infantry was gradually closing on Ypres west of the canal.

Maddened by the resistance they met with from plainly inferior numbers, and eager to add to the laurels which their fathers had gained in the Franco-Prussian War, the Bavarians pressed onward. What Kluck's troops had failed to do at Mons and Le Cateau they would accomplish; to the Bavarians should belong the honour of being the first troops to rout the world-renowned British infantry!

Indeed for a time it seemed as if the Bavarians, their Crown Prince, and the Kaiser were to have their way, and that, borne down by numbers, devastated by superior fire, the I. Corps would literally be blown away. The 2nd Welsh Regiment, after performing prodigies of valour round Gheluvelt, fell back. The Queen's Own (1st Royal West Surrey Regiment), on their right, were surrounded on both flanks and raked by machine guns. Yet few retreated, and none surrendered: the majority died fighting at their posts. The 2nd Royal Scots Fusiliers of the 21st Brigade, part of the 7th Infantry Division holding trenches south of the Queen's Own, were cut off, surrounded, and almost annihilated. At 1.30 p.m. a violent attack was made on General Lawford's Brigade, on the right of the 7th Infantry Division, and the headquarters of the 1st and 2nd Divisions were discovered and shelled by the Germans. General Lomax (commanding the 1st Division) was wounded, and his place taken by General Landon. The commander of the 2nd Division received a severe contusion and was unconscious. Six Staff officers of the two Divisions were killed on the spot. It was, indeed, a soldiers' battle, and one which was only prevented from becoming a disaster by the superb fighting qualities of our men.

On the road near the Château de Hooge was Sir Douglas Haig. In the woods before him where the battle raged it was impossible to see what was happening. About 2 p.m. Sir John French joined him. The two leaders paced up and down anxiously awaiting news. Suddenly a horseman appeared in the distance galloping up the road at full speed. Perceiving Sir John and Sir Douglas, he drew up, dismounted, and told them that Gheluvelt was taken. A few minutes later, at 2.30 p.m., General Lomax reported that the 1st Division was retreating, pursued by the enemy.

"It was," as Sir John French says, "the most critical moment in the whole of this great battle." The 1st Division was collapsing; the left of the 7th Division was beaten; Lawford's Brigade (the 22nd) on its right was falling back; Bulfin's Brigade (the 2nd), imperilled by Lawford's retirement, was also compelled to give way.

It seemed impossible that the fight could be re-established. On the roads behind the German lines, our aeronauts reported, long lines of auto-omnibuses were waiting to transport the German reinforcements to any point of the battlefield. The news of the defeat of the I. Corps would be communicated to the German Staff and overwhelming forces at once directed west of the canal to break through the Cavalry Corps and the two Indian regiments, to storm the ridge of the Mont-des-Cats and to cut the retreat of the Allies through Ypres on Poperinghe. The victory of Ramscappelle that morning was rendered nugatory, and the Allied Army would be fortunate if it could manage to draw off safely.

Directions were sent to withdraw the artillery through Ypres, whence the panic-stricken inhabitants were flying back to Poperinghe.* To cover the retreat of the French to the left of Zonnebeke, the I. Corps received orders from Sir Douglas Haig to hold the line at all costs from Frezenberg through Klein Zillebeke to the Comines-Ypres Canal.

* 3 p.m. "All the town were leaving for Poperinghe as the guns were coming through from the front. . . . To our surprise, half an hour later, we saw all the guns returning and going out towards Gheluvelt again."—Mr. Underwood.

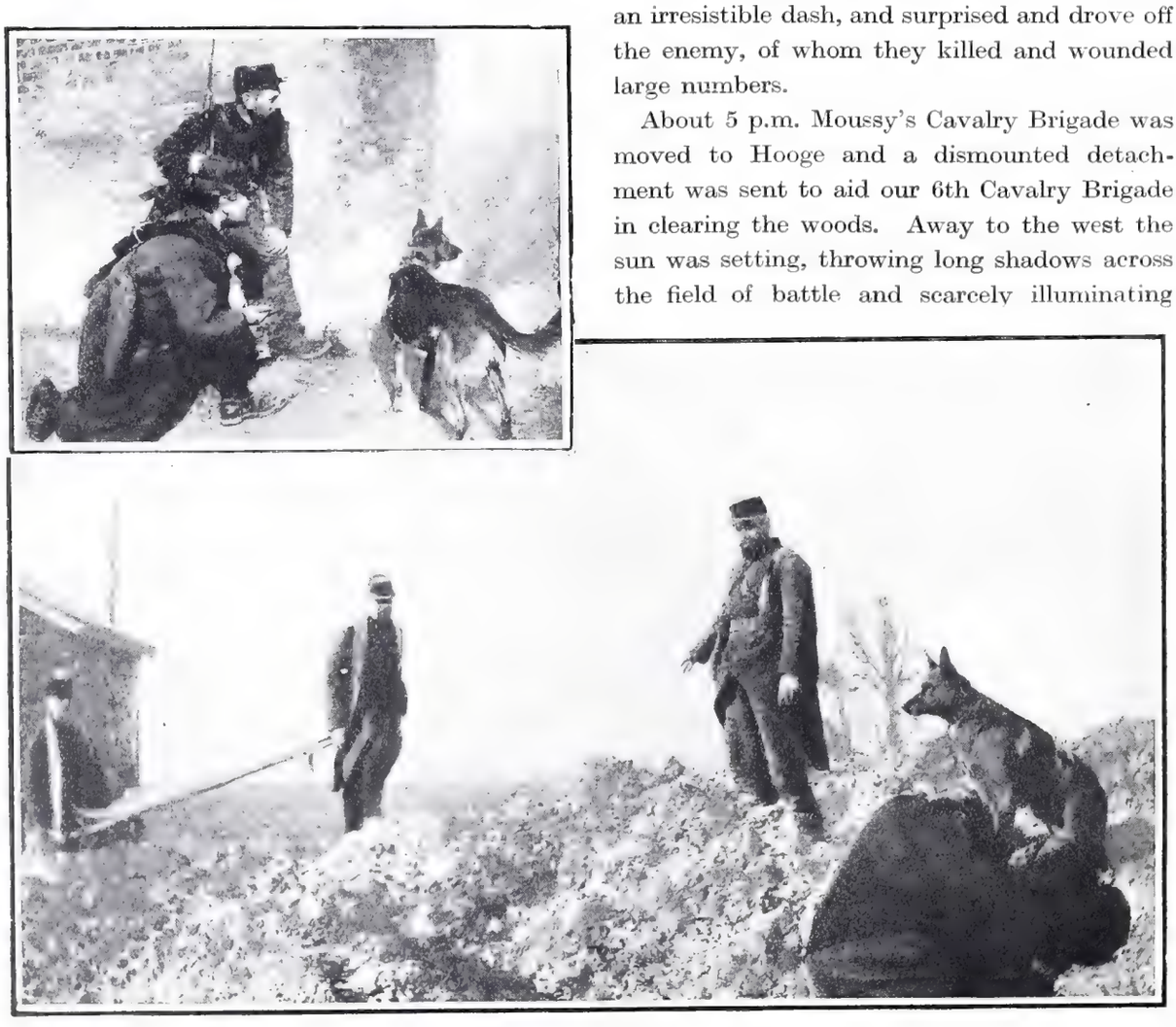
Scarcely had these orders been sent off than they had to be countermanded. For, as at Albuera, the British infantry of their own initiative had refused to know when they were beaten, and Moussy's troops, like the Young Guard at Plancenoit, Waterloo, had thrust back the German masses.

The 1st Division had rallied in the woods west of Gheluvelt. The German advance up the road was brought to a full stop, and the Division, supported by Byng's 6th Cavalry Brigade, moved back along the road towards Veldhoek. To the south, though the 22nd Infantry Brigade (General Lawford's) had retired, General Capper restored the combat by bringing up his reserves, and the trenches on the right of the 7th Division were held.

Meanwhile the left of the 1st Division and the right of the 2nd Division to its north had simultaneously organized a counter-attack. The 2nd Worcestershire Regiment (5th Infantry Brigade, 2nd Division), commanded by Major E. B. Hankey and supported by the 42nd Brigade of Royal Field Artillery, charged with the bayonet and carried in the most gallant manner the village of Gheluvelt and the grounds of its Château. The charge was made under a very heavy fire of guns, and will rank among the finest ever carried out by our infantry. "If any one unit," says Sir John French, "can be singled out for special praise it is the Worcesters. . . . I have made repeated inquiries as to what officer was responsible for the conduct of this counter-stroke, and have invariably received the reply that it was the Worcestershire Regiment who carried out this attack." Once more this grand old regiment had shown what discipline, *esprit de corps*, and the perfect self-confidence engendered by it, were capable of.

The recapture of Gheluvelt was followed by an advance of the left of the 7th Division almost to its original line, and connexion between the 7th and 1st Divisions was thus re-established. Two regiments of the 6th Cavalry Brigade were sent into the woods south-east of Hooge to clear out the Germans who had penetrated there, and to close the gap in the line between the 7th Division and Bulfin's Brigade (the 2nd). Partly mounted and partly dismounted, they advanced with an irresistible dash, and surprised and drove off the enemy, of whom they killed and wounded large numbers.

About 5 p.m. Moussy's Cavalry Brigade was moved to Hooge and a dismounted detachment was sent to aid our 6th Cavalry Brigade in clearing the woods. Away to the west the sun was setting, throwing long shadows across the field of battle and scarcely illuminating



THE DOG FINDS A WOUNDED SOLDIER. **Inset: The Soldier's Watch Dog.**

counter-attack, as it served to cover the small numbers of the khaki line driving them back, and took from the worn-out German soldiers any other desire but to reach a position of safety by continuing their retreat. Gradually their pace increased as they felt more and more the pressure of the continued Allied advance. Between Zonnebeke and the canal the Germans were gradually hunted from the woods until the lost ground was once more won back. "By 10 p.m.," says Sir John French, "the line as held in the morning had practically been re-occupied."

The extreme left of the I. Corps round Zonnebeke had been but slightly engaged; but on the extreme right Lord Cavan's Brigade (the 4th) had near the canal repulsed some half-hearted infantry attacks.

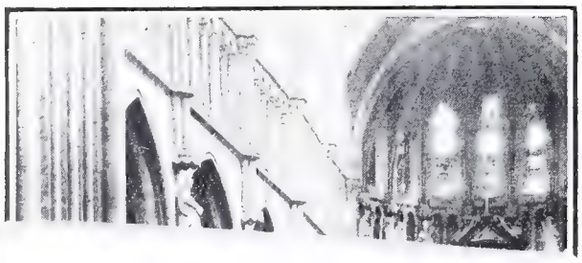
During the night the right of the 7th Division renewed contact with the left of Bulfin's Brigade, the services of Moussy's Cavalry were dispensed with, and Byng's 6th Cavalry Brigade was drawn back into reserve, and the bulk of the 7th Cavalry Brigade brought back across the canal to Verbranden Molen behind Klein Zillebeke. Perhaps the best comment on this "soldiers' battle," as the British Eye-Witness called it, was made by a private soldier of the Warwicks, badly wounded on the 31st. "Well, sir," he said to Mr. Underwood, "England can't say we did not stick it to the last . . . I used to be afraid of hell, but hell can't possibly be worse than what we have been through the last few days."

West of the Comines-Ypres Canal, between Hollebeke and the Lys, the day and night of the 31st had been signalised by feats equally glorious on the part of the British. "Two nearly fresh German Army Corps," remarks Sir John French, "were advancing against the 4,000 or so troopers of the Cavalry Corps, whose only supports at that moment were two exhausted Indian battalions, General Shaw's four worn-out battalions of the II. Corps, the London Scottish Territorial Battalion at Neuve Eglise, and the portion of the wearied III. Corps in the trenches from the Wood of Ploegsteert to the Lys. For forty-eight hours, at the price of heavy losses and superhuman exertions, the Cavalry Corps kept the Germans out of St. Eloi and from mastering the crest of the ridge of the Mont-des-Cats." This was, indeed, glorious fighting.

From the bend of the canal at Hollebeke to Wytschaete is a distance of about 5,000 yards. The country between is wooded, especially round Hollebeke. During the day part of the 2nd Cavalry Division under General Gough, with the help of the 7th Cavalry Brigade, had defended the trenches from Hollebeke to Wytschaete against enormous odds. There it was that Acting-Sergeant W. Siddons of the 4th Hussars won his medal for Distinguished Conduct in defence of the canal bridge. He had also carried messages under heavy fire, and had made a useful reconnaissance. If the Germans had broken the line between Hollebeke and Wytschaete they would have reached Ypres, and the I. Corps and part of the French 9th Corps would have been cut off. From this disaster the Cavalry Corps saved the Allies. No language can adequately express the debt which the Empire owes to Allenby's heroic men.

At 2 a.m. (November 1) the Bavarians

attacked Wytschaete, the point where the trenches from west turned south along the eastern edge of the ridge of the Mont-des-Cats. The moon had risen, and the Germans, undeterred by the murderous fire from the trenches almost flanking their advance, came on in the most gallant way, shouting at the top of their voices and in such numbers as made them seem like a swarm of locusts. Sixteen infantry battalions, line after line, their light uniforms and bayonets gleaming in the pale moonlight, made easy marks for the British guns and rifles, but the woods afforded them some cover. "We stayed," says a British soldier present, "perfectly quiet for about ten minutes, listening to a perfect babel of voices, which sounded as if thousands of drunken men were coming towards us, and then within the wood in front of us we saw line after line of German infantry advancing, the main body of which swung off left-handed in front of the 1st Life Guards trench." The trench fell into their hands for a moment, but was at once retaken by a counter-attack. To the right the Germans, their ranks thinning at every step, also broke through, captured one end of the village of Wytschaete, and in the fight which



YPRES CLOTH HALL.
Fired by German shells.

ensued some of the British troops who had retired through a tobacco plantation into Wytschaete had to fight their way out. Then joining on to a company of the North Staffordshires, they kept the enemy at bay and prevented him from debouching and ascending the ridge beyond. A pause took place in the combat, but at 6 a.m. a column once more rushed forward against the small containing force. But by this time half a battalion of the North Staffordshires and a battalion of the Leicesters had come up in support, and the reinforcement was sufficient to force the Germans back.

The British now attempted a counter-attack and a company entered Wytschaete, but was mowed down by a machine gun. "I never want to see anything like it," says an officer describing this incident; "they were killed like so many sheep, and the sight made one, even in the excitement of the moment, quite sick." Wytschaete remained in the possession of the Germans, but they had suffered almost incredible losses. "They came on so thickly, you simply could not miss them."

The Germans had thus obtained one of the

Bale.

SERGT. JOHN HOGAN, V.C.,
The Manchester Regiment.

two villages on the edge of the Mont-des-Cats.

A mile and a half to the south of Wytschaete they had also driven the British out of Messines, at the southern end of the ridge. The masonry of the church tower was so strong that parts of it defied the German high-explosive shells, but everything inside the church was burnt, with the exception of a crucifix.

The British now retired to the ridge behind the village of Messines. At 2 a.m.—about the same time as Wytschaete was attacked—the Bavarians, who had been firing at and assaulting the trenches held by the Cavalry and the London Scottish, made a frontal and flank attack in great force. A portion of the enemy inserted themselves between the first and second line of the London Scottish trenches, and set on fire a house behind the firing line, so as to throw up the forms of the troops in the trenches. A company which had been held in reserve made repeated bayonet charges to prevent an entire envelopment of their battalion, but could not prevent a considerable force working round both flanks with machine-guns. At dawn the troops were ordered to retire, which they did under a heavy cross-fire. They had lost heavily, but they had shown that our Territorial troops were fully capable of dealing with their German opponents, even when outnumbered and outmanœuvred.

Wytschaete and Messines were indeed lost, but the Germans had failed to gain the summit of the ridge of the Mont-des-Cats.

Meanwhile the extreme right of the 1st Cavalry Division's trenches and St. Yves had been taken over by the 4th Division, "although this measure necessitated," says Sir John French, "a still further extension of the line held by the III. Corps." Against the greater part of the position held by that Corps, however, the enemy had not advanced on the 31st, though they had attacked from the Givenchy-Radinghem ridge the Indians and British on the right wing with considerable energy. Had the Kaiser met with more success round Ypres it is to be presumed that reinforcements would have been transferred by rail and motor to the region of La Bassée and that the next morning a determined effort would have been made to sever Sir John French's right from the left wing of General de Maud'huy.

Thus the net outcome of this bloody battle was that, except for the capture of Messines and Wytschaete, the Germans everywhere from the sea to La Bassée had been repulsed by the Allies with heavy loss, a poor result to be purchased by such hecatombs of

Lafayette.

2nd LIEUT. J. LEACH, V.C.,
The Manchester Regiment.

slain. In the inundation east of the Nieuport-Dixmude railway floated the corpses of thousands of the Duke of Wurtemberg's soldiers. The fields from Dixmude to Zonnebeke, the woods from Zonnebeke to Wytschaete, the slopes of the ridge of the Mont-des-Cats, were strewn with dead and dying Germans.

The flooding of the Yser district proceeded; heavy howitzers were brought up; naval guns placed between Dixmude and Bixschoote. The Cavalry Corps was reinforced and, soon afterwards, the 2nd Cavalry Division was replaced by the French 16th Army Corps and by Conneau's Cavalry Corps, which had been previously transferred from the south to the north bank of the Lys. During the remainder of the battle it was to the French troops that the task was allotted of parrying the thrusts of the Germans at Ypres between Wytschaete and Klein Zillebeke.

On Sunday, November 1, there was no cessation of the bloody contest. The Kaiser had arrived at Courtrai. The capture of Wytschaete and Messines had doubtless filled his mind with hope, which, however, was not shared by the Saxon professor who, taken prisoner that day, stated as his opinion that Germany realized that she had failed in her object, and was only fighting in order to obtain good terms.

Once more the German masses were thrown on the Allies round Ypres. The French troops who had been passed into the Polygone de Zonnebeke woods, and were trying to break the German line at Becelaere (between Zonnebeke and Gheluvelt), were brought to a standstill, and General Moussy's three regiments and cavalry brigade, holding the trenches from Klein Zillebeke to the Comines-Ypres Canal, were obliged to fight on the defensive, while the I. Corps in the intervening space underwent another ordeal of the most terrible kind.

During the night Lord Cavan's Infantry Brigade (the 4th) had been moved up to the support of the already overtaxed and sorely tried 7th Infantry Division. On its left was General Bulfin with the 2nd Brigade, soon to be reinforced by the 6th Cavalry Brigade. Later the 7th Cavalry Brigade was dispatched to the assistance of Lord Cavan.

About 7.30 a.m. the Germans began firing salvos of high-explosive shells intermittently with what they call "universal."

The latter is a combination of common shell and shrapnel, and can be fired with a time fuse, when it acts as shrapnel shell, or with the fuse set for percussion, when it bursts on impact. In the first case the head which forms the common shell moves on and bursts when it strikes the object. This projectile is used by the German howitzers.

Soon after 2 p.m. the 2nd Gordon Highlanders (20th Infantry Brigade, 7th Division) gave way, after suffering severe loss. They had resisted the terrific strain so long that further effort was impossible. In pursuit of the Gordons came a torrent of Germans eager to bayonet the worn-out men. This retirement involved that of the Oxfords placed between the Gordons

GERMANS ERECTING SHELTERS.

GENERAL JOFFRE GIVING THE LEGI

and the 1st Irish Guards. The Earl of Kingston, a lieutenant in the last-named regiment, describes the scene :

> Suddenly I saw the Gordons retiring, followed by thousands of Germans. We could do nothing. If we shot there was as much chance of killing our own men as the enemy, as they seemed all mixed up—Gordons, Oxfords, and Germans.

Again there was a gap in the line, but again it was filled. The 7th Cavalry Brigade and Moussy's French troops stemmed the German advance. By nightfall the Allied position in this quarter was the same as it had been on the evening of the 31st.

In the meantime, at 11 a.m., the British Cavalry and the French reinforcements, by a brilliant bayonet charge, drove the Germans out of Wytschaete, but the village was afterwards abandoned. So long as the ridge of the Mont-des-Cats behind Wytschaete and Messines was held there was no object in exposing troops in the advanced positions of these two villages to the fire of the German artillery. The attempts of the enemy to storm the ridge were everywhere repulsed with terrible loss to him, and the Bavarians moving along the British front towards St. Eloi, suffered most heavily from the massed fire of the guns of the British Horse Artillery, which, like Senarmont's guns at Friedland, were brought to within a short distance of the enemy's columns.

November 1 will be long remembered by the British artillery. Their howitzers demolished two of the enemy's 8-in. guns, and every account showed that they had taken a fearful toll of the enemy.

In the night of the same day the 1st East Lancashire Regiment received (probably from a disguised German) the order to evacuate their trenches near Le Gheir. The men had obeyed, but an officer, helped by Drummer Spencer John Bent, had the presence of mind to call

bullets, wrote [illegible]

"I got over the blood-tub trenches by walking over German dead four and five deep." Though the Kaiser seemed delivering his main attack north and not south of the Lys, as a precautionary measure the Secunderabad Cavalry Brigade and the Jodhpur Lancers, which detrained on November 1 and 2, were sent to join the Indian Expeditionary Force. The German leaders had shown that they regarded the lives of their men as of no value, and the costly assaults round Ypres might be merely feints preliminary to a blow against the British right wing.

It was time, in any case, that the British right wing was supported. On Monday, November 2, several assaults were made on the Indians, and the Germans carried Neuve Chapelle. An attack on Armentières and the trenches to its north and south, however, failed. "Hell let loose," says a soldier. "Lost 30 men in less than 30 minutes by shells, eight or nine men being buried alive. . . . I was blown from my rifle by a shell."

North of the Lys the Germans who had been reinforced by the 2nd Army Corps, persisted in their efforts to capture the ridge of the Mont-des-Cats and Ypres. They sapped up to within a hundred paces of the trenches round Le Gheir and along the edge of the Ploegsteert Wood, and at 4 a.m. pneumatic mortars began throwing

heavy shells which on explosion made huge holes. Many times the Germans charged ; many times they were beaten off. From the Ploegsteert Wood to Wytschaete and from Wytschaete to Hollebeke the battle raged fiercely, and near Messines the Germans for a brief period were successful. The French in turn attacked Wytschaete, which remained disputed ground, "the village fiercely blazing amidst a hail of shells from both sides."

To the German artillery the British and French guns replied successfully by a concentrated fire, and so long as the Ploegsteert Wood, and the Neuve Eglise and the Mont-des-Cats ridges remained in the possession of the Allies, it was madness for the Germans to advance in this direction on Ypres, for the country, except between Wytschaete and Hollebeke, was of an open character and afforded no cover to the attacking troops. Everywhere it could be covered by a devastating fire from the dreaded "Soixante quinzes," and from howitzers directed by observers on the ridges or from aircraft. There was consequently ample justification for the criticisms on the German leadership contained in the following entry in the diary of a German soldier :

NOVEMBER 2.—Before noon sent out in a regular storm of bullets by order of the major. These gentlemen, the officers, send their men forward in the most ridiculous way. They themselves remain far behind safely under cover. Our leadership is really scandalous. Enormous losses on our side, partly from the fire of our own people, for our leaders neither know where the enemy lies nor where our own troops are, so that we are often fired on by our own men. It is a marvel to me that we have got on as far as we have done. Our captain fell, also all our section leaders and a large number of our men.

Moreover, no purpose was served by this advance, for we remained the rest of the day under cover and could go neither forward nor back, nor even shoot. A trench we had taken was not occupied by us, and the British naturally took it back at night. That was the sole result. Then when the enemy had again entrenched themselves, another attack was made costing us many lives and fifty prisoners.

It is simply ridiculous, this leadership. If only I had known it before ! My opinion of the German officers has changed. An adjutant shouted to us from a trench far to the rear to cut down a hedge which was in front of us. Bullets were whistling round from in front and from behind. The gentleman himself, of course, remained behind. The 4th Company has now no leaders but a couple of non-commissioned officers. When will my turn come ? I hope to goodness I shall get home again !

Still in the trenches. Shells and shrapnel burst without ceasing. In the evening a cup of rice and one-third of an apple per man. Let us hope peace will soon come. Such a war is really too awful. The English shoot like mad. If no reinforcements come up, especially heavy artillery, we shall have a poor look-out and must retire.

The first day I went quietly into the fight with an indifference which astonished me. To-day, for the first time in advancing, when my comrades right and left fell, felt rather nervous, but lost that feeling again soon. One becomes horribly indifferent. Picked up a piece of bread by chance. Thank God ! at least something to eat.

There are about 70,000 English who must be attacked from all four sides and destroyed. They defend themselves, however, obstinately.

East of the canal the Germans were more fortunate. Once more the line of the I. Corps had been pierced and Ypres thrown into a panic. "For an hour," writes a French officer, "we thought the final catastrophe had arrived." But two battalions of Zouaves were sent to Sir Douglas Haig ; and at 1.30 p.m. the 7th Cavalry Brigade galloped up under shell fire to support the troops near Veldhoek. The French on both flanks of the I. Corps counter-attacked, and though they, as well as the Zouaves and the British, lost heavily and General Bulfin was severely wounded, the enemy could advance no farther. From Zonnebeke to Bixschoote and from Bixschoote to Dixmude he had made no headway, and his progress northward to the sea had been definitely checked by the inundations. He had had to abandon in the mud two heavy howitzers and some field artillery, and the whole of the Duke of Wurtemberg's right wing was being withdrawn and directed on Ypres.

The next day (November 3) Sir John French called on his men to hold out at all costs, and informed them that French reinforcements

were approaching. The tension had been so great that the soldiers required encouragement.

Ypres was being savagely bombarded, and the inhabitants were flying to Poperinghe, but so exhausted were the Germans that, though Gheluvelt had been evacuated by the British, the enemy did not press his attack on Ypres from the north and the north-east.

On the other hand, the French simultaneously took the offensive from their bridge heads at Dixmude, Fort de Knocke and Nordschoote—as Joffre intended to establish his line east of the Yser Canal on the high road which runs south of Dixmude through Woumen, and from it to dislodge the enemy from the Forest of Houthulst, in which were hidden a large number of the German guns. Grossetti and Ronarc'h, therefore, attacked from Dixmude the Château de Woumen with four battalions of the French 42nd Division and a battalion of the French Marines.

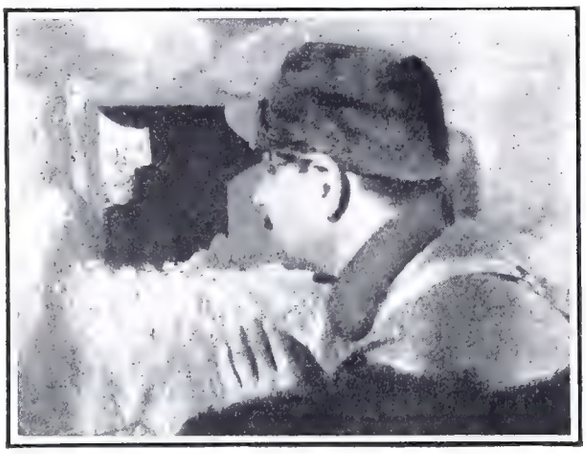
During November 3 the French were unable to make any progress. On the 4th, in a dense fog, they crossed the canal south of Dixmude, and brought 50 guns to open fire on the park and buildings of the Château, which was attacked by the whole of the 42nd Division. At nightfall the infantry were within 400 yards of it. The Germans replied by threatening Dixmude from Beerst, and a detachment of Ronarc'h's Marines was sent to the support of Meyser's Belgians holding the trenches at this point. On the 5th in beautiful weather the French at daybreak assaulted the Château and captured the park and farm. But all their efforts to take the Château itself, which bristled with machine-guns, were unavailing. The 42nd Division, leaving two batteries of "75" guns with Ronarc'h, withdrew through Dixmude.

Although this offensive and those from Fort de Knocke and Noordschoote had not been successful, they had had the effect of containing a large number of the Duke of Wurtemberg's troops, who could otherwise have moved on Bixschoote and Zonnebeke.

To return to the events of the 3rd; on that day the 6th Bavarian Corps and the 25th Division of the 13th Army Corps had endeavoured to advance on Ypres from the line Wytschaete-Hollebeke, but had been beaten back by the French and British. Between Wytschaete and the Lys there was severe fighting, and the enemy pushed forward north of the Ploegsteert Wood towards Wulverghem. There were also some minor attacks south of the Lys and far off beyond the right wing shells were thrown into Béthune.

Three French Divisions had now reached the trenches, and on November 4 a reconnaissance was made from Nieuport towards Lombartzyde, and German artillery was located near Westende. On the Yser front it was discovered that weak rearguards held the bridges at St. Georges, Schoorbakke and Tervaete, and also certain farms on the left bank of the canal round Oud Stuyvekenskerke. The German Staff the day before had admitted their repulse on the Yser. "Our operations south of Nieuport," they said, "are rendered impossible owing to the floods, the water in parts being deeper than a man's height. Our troops," they added with characteristic mendacity, "have retreated from the submerged district without suffering any loss either in men, horses, cannon or wagons." As a practical fact, they had lost all four. On the morning of the 4th an almost continuous column of all arms, extending from Leke through Thourout, was passing eastwards and several trains from Thourout were steaming to Roulers and Deynze,

TRENCHES BEFORE YPRES.



WATCHING THE ENEMY THROUGH A LOOPHOLE.

which is a town on the Lys between Ghent and Courtrai.

Round Dixmude, as already narrated, Grossetti attacked the Château de Woumen, but, to the south, the Germans stormed Bixschoote.

That their spirit was still unshaken was shown by a cavalry charge delivered at dusk on the French trenches. Like the Polish Lancers launched by Napoleon against the Spanish entrenchments at Somosierra, these brave horsemen galloped forward. Every horse was shot, but some of the riders continued the charge on foot until the last survivor was slain on the very parapet of the trench. It was one of the few occasions on which the German Cavalry had distinguished itself in the war. Some attacks against the I. Corps were easily beaten off, and west of the Comines-Ypres Canal the French, under cover of the Allied guns, attacked and, in spite of the fire of the enemy's massed artillery, gained some ground. South of the Lys the III. Corps was not attacked, and on the right, after dark, the Indian troops captured and filled in some of the German trenches. Carnot and Englos, two of the old forts of Lille, were partially destroyed by French and British aeronauts on this and the succeeding day.

We here pause to insert a moving description of the havoc wrought in the region of the battlefield. A captain in the Royal Field Artillery writes as follows:

> The wreck of the country is indescribable, towns in ruins, churches razed to the ground and burnt, farm after farm smashed to bits, the people fled or lying terrified in their farms, some wounded with no one to succour them. We found an old man of 80 with a piece of steel shell festering in his arm; we managed to get him into a convent, but as he had been like that for four days I'm afraid there was but little that could be done for him.
>
> I tell you this war is the most appalling crime that was ever committed, and if only English people, living in their unharmed luxury at home, could catch a glimpse of the utter misery that exists where fighting is and has been, they would be absolutely horrified. I sit as I write in a lovely house, in the kiddies' schoolroom, deserted by all save a faithful concierge. There is an immense shell hole in the upper storey, where everything is wrecked and the rain pours in pitilessly on the beautiful rooms. The whole house has been ransacked, hundreds and hundreds of empty bottles everywhere, every cupboard, every drawer, everything private burst open and all worth taking removed. What was not worth taking is piled up in the middle of the rooms on the lovely carpets.

This letter was dated Thursday, November 5. On that day the Belgians pushed eastwards from Nieuport and a detachment of Ronarc'h's Marines reoccupied Oud Stuyvekenskerke. South of Dixmude, though the Château de Woumen remained untaken, the French scored a success. They drove the enemy from Bixschoote. The fighting near this place was of a most desperate character. The French resisted stubbornly, but enormous losses did not stop the German attack. Up to Thursday evening they came on repeatedly, with fresh troops. One trench was lost and retaken seven times during the day.

To the east of Ypres there was a lull in the storm, and Sir John French replaced part of the I. Corps by eleven battalions of the II. Corps. These battalions were very depleted, but not to such an extent as the 21st and 22nd Brigades of the 7th Infantry Division, which were at last given a rest. Of the 21st Brigade only eight officers out of 120 and 750 men out of 4,000 were left. The 22nd Brigade mustered no more than four officers and 700 privates. The 2nd Royal Scots Fusiliers—to instance one of the regiments in the 21st Brigade—had disembarked at Zeebrugge on October 6 over 1,000 strong. Now it was reduced to 70 men with the junior subaltern in command. These figures are eloquent indications of the price which had been paid by Capper's Division during a month of marching, entrenching and fighting.

South of Ypres, which now began to be bombarded in earnest, the French advanced some distance, and Wytschaete, Messines and German trenches on the side of the eastern end of the Mont-des-Cats ridge were cannonaded by the Allied artillery.

After a day's comparative inaction the Germans renewed the offensive. They attacked Bixschoote and tried to penetrate to Ypres between the Menin-Ypres road and the Comines-Ypres Canal. At Bixschoote they were repulsed, but the French troops holding the space from Klein Zillebeke to the canal fell back. General

Kavanagh, with the 7th Cavalry Brigade, hurried up to their support. The 1st and 2nd Life Guards, with the Blues in reserve behind the centre, were deployed north of the Zillebeke-Klein Zillebeke road. The French halted and counter-attacked, but near Klein Zillebeke the Germans, who had been reinforced, returned to the charge. The French broke, and General Kavanagh, to stem the rush, doubled a couple of dismounted squadrons across the road. There was a mêlée of English, French and Germans, and the 7th Cavalry Brigade was obliged to retire to the reserve trenches. The position was very critical, but Lord Cavan, with the 4th Infantry Brigade, which was to the left of the French, descended on the German flank and re-established the line. It was not till 2 a.m. that the action ceased. Colonel Gordon Wilson, commanding the Blues, and Major the Hon. Hugh Dawnay, D.S.O., had been killed, and the 7th Cavalry Brigade had suffered heavy casualties. For his services in this engagement General Kavanagh was specially thanked by Sir John French.

While the Klein Zillebeke action was proceeding, the French again advanced and assaulted Wytschaete and Messines. South of the Lys at night the Germans made two unsuccessful attacks. Far away on the right a British armoured train from Béthune shelled the German trenches round La Bassée.

On Saturday (November 7) there was more fighting near Bixschoote.

For forty hours (says a French soldier) we fought foot by foot. It is impossible to describe such a hell, but I witnessed the following incident. A German regiment advanced with flag flying. At 300 yards from our own trenches it was met by a fire so deadly that it fell back. After being re-formed in the rear it returned in markedly-diminished numbers, and this time it got within about 100 yards of our lines. Our guns poured a torrent of fire upon it, and again it retreated. A third time it attempted the assault. This time the order was given to hold fire till they had come up. At 20 yards every gun and rifle blazed away. Ten minutes later the regiment was wiped out. In less than an hour 3,000 men had been slain.

The I. Corps was also engaged along the Menin-Ypres road and the British line was temporarily driven back, and south of the road the enemy penetrated as far as Zillebeke. A counter-attack by the 1st South Staffordshires, gallantly led by Captain J. F. Vallentin, who was killed, ended in the capture of the enemy's trenches. The Irish Guards, obliged to retire during the night owing to the French having left their trenches on the right, regained by a bayonet charge their position of the day before. South of Ypres from the canal near Klein Zillebeke, round Wytschaete to the Wood of Ploegsteert, the fighting continued with unabated fury, the French defeating every advance of the Germans, who were subjected to a hail of shells from positions on the ridge of the Mont-des-Cats.

The trenches on the edge of the Wood of Ploegsteert had during the night been captured by Saxon infantry. A counter-attack by the East Lancashires ended in the recovery of most of the lost ground. It is well described by an officer of the regiment:

On November 7 firing broke out at dawn at 5 a.m., when it was very misty. We were standing to arms when at 8 a.m. orders came to march the regiment to Headquarters and wait for orders. We were kept there till 3 p.m., when we were told the Germans had broken through our line of trenches and had occupied them, and we had to retake them and restore the broken line: exactly the same job as on the 21st ult. So away we plunged into the woods, and by following the rides arrived, after much slipping about in the greasy clay and with water over our boots, about 600 yards short of the edge of the wood the Germans were holding. Soon after a tornado of fire broke out, and the bullets and shells crackled and sparkled through the trees. You never heard such a row. We all threw ourselves on our faces. When that was over we slithered along the greasy path until we came out on our old road to our trenches. Here D and A Companies were sent to rush the trenches in front and reoccupy them, the bayonet only to be used. As soon as they rushed a tremendous fire broke out, but gallantly led by Captain Cane, who was killed, they took the trench.

To support the troops in the Ploegsteert Wood the 22nd Infantry Brigade, which was enjoying a well-earned rest in Bailleul, was

CAPT. J. H. S. DIMMER, V.C.
King's Royal Rifle Corps.

THE ROLL CALL.
The London Scottish after the charge at Messines.

moved the next day up to Ploegsteert.* At the same time the 3rd Cavalry Division (Byng's) took over the right section of Lord Cavan's trenches. The fact that the 22nd Infantry Brigade and the even more sorely tried 3rd Cavalry Division had still to be used as reinforcements shows the difficulties against which Sir John French had to contend with the few troops at his disposal. The Kaiser had far more and fresh troops available; but all their efforts were foiled by the gallantry of the Allies.

The Kaiser was now preparing for his second great attempt in 1914 to take Ypres and win a decisive victory north of the Lys. On November 8 the Duke of Wurtemberg recommenced his attack on Dixmude. Violent fighting continued round Bixschoote. At 2.30 p.m. the enemy temporarily pierced Sir Douglas Haig's line north of the Menin-Ypres road. After another severe struggle lasting almost to nightfall the Germans were driven back south of Ypres, the French pressed forward, and the Allied artillery stopped reinforcements reaching the enemy who were still in the Wood of Ploegsteert. Between the Lys and the left of Maud'huy's Army two attacks were repulsed and a German assault beaten off. All along the line there were engagements.

The German plan was before their last reserves were engaged to wear down the fast-weakening British soldiers, whom they judged to be nearing the end of their tether. Indeed, the only reinforcements immediately available were small in number, consisting only of the North Somersetshire, Leicestershire, Northamptonshire and Oxfordshire Regiments of Yeomanry (Territorial) Cavalry and the Hertfordshire Regiment of Infantry, the Honourable Artillery Company and the Queen's Westminster Battalions of Territorial Infantry.

The London Scottish and Hertfordshire Territorials and the Somerset and Leicestershire Regiments of Yeomanry, with three more of the depleted battalions of the II. Corps, were placed under Sir Douglas Haig's command. The London Scottish were in the Klein Zillebeke trenches.

November 9 (Monday) was a comparatively quiet day. The last arrangements were being made by the Kaiser for his final blow. Two divisions of the Prussian Guard were being transferred from the region of Arras through

* In this village a British howitzer, cleverly ensconced in the garden of the Mayor, had been daily shelling the Germans.

Courtrai to the neighbourhood of Gheluvelt. These picked troops were intended, like Napoleon's Guard, to deal a knock-out blow.

It was the last desperate effort of the Germans to crush the British by weight of numbers. Lord Kitchener was explaining that night at the Lord Mayor's banquet that "armies cannot be called together as with a magician's wand," but his powerful personality had already drawn from the peaceful masses of the United Kingdom a "million and a quarter" of brave and determined volunteers whom he was fast converting into soldiers.

With a clearer view of facts than Bernhardi and his school, who despised our Colonial troops, the British Minister of War reminded his hearers that "the enemy have to reckon with the forces of the great Dominions, the vanguard of which we have already welcomed in the very fine body of men forming the contingents from Canada and Newfoundland; while from Australia and New Zealand and other parts are coming in quick succession soldiers to fight for the Imperial cause." The Indian troops "have gone into the field with the utmost enthusiasm." As for the French: "we have now been fighting side by side with our French comrades for nearly three months, and every day increases the admiration which our forces feel for the glorious French Army," while "what the Belgians have suffered and achieved has aroused unstinted and unbounded admiration." These were the sober words of the most experienced soldier of the age. "Under the direction of General Joffre, who is not only a great military leader, but a great man," said Lord Kitchener, "we may confidently rely on the ultimate success of the Allied forces in the western theatre of war." Almost everywhere except in Turkey, which had just declared war on the Allies, the Kaiser and his councillors had seen their cunning plans thwarted. "In the east the Russian Armies, under the brilliant leadership of the Grand Duke Nicholas, have achieved victories of the utmost value and of vast strategical importance." Never can the Kaiser have felt more acutely the necessity for an overwhelming victory in the west.

A CAPTURED GERMAN SPY.
He was found dressed as a French peasant.

The weather was favourable for his plans. Heavy mist and fog covered the flat soil, and the observers on the Allied aeroplanes were unable to detect the movements of the enemy's troops.

THE PRUSSIAN GUARDS BEATEN BACK BY THE BRITISH.

The new phase of the battle began with a success for the Germans. At 2 a.m. on November 10 they opened a bombardment of Dixmude more terrific than any yet experienced by its garrison. The French trenches were blown in, and at 11 a.m. a mass of 40,000 Germans precipitated themselves on Ronarc'h's handful of Marines and Belgians. The three lines of trenches across the road from Eessen were carried. Attacked on all sides, the heroic defenders were driven back into the ruins of the town. Placing French prisoners in front of their columns, the Germans rushed on. Ronarc'h poured his last reserves over the Yser, and in the streets, among the gutted houses, a frightful hand-to-hand combat ensued.

Hour by hour the fighting continued, and Admiral Ronarc'h at 5 p.m. withdrew the remains of his troops to the west of the Yser. The canal bridges were destroyed, and the Duke of Wurtemberg, who had lost 10,000 men, was left with a heap of bloodstained ruins and a few prisoners as the trophies of his bloody victory. The floods spreading in front of Dixmude and between Dixmude and Bixschoote, and behind the floods the French howitzers, naval guns, " 75 " guns, and mitrailleuses with the indomitable French and Belgian infantry, still barred the way to Calais and precluded the Duke from assisting the Kaiser in his assaults on Ypres by a flanking movement from the north.

Ronarc'h's Marines and Meyser's Belgians had proved themselves worthy rivals of the finest British troops. From October 16 to November 10 they had maintained themselves in an exposed position against enormous numbers supported by an immense artillery. The defence of Dixmude forms a brilliant page in military history.

Meanwhile south of Dixmude the French line as far as Zonnebeke had been subjected to a series of the most violent attacks. At Bixschoote and Langemarck masses of newly joined German youths had been flung at the French trenches. They had fought with stubborn courage, but had been repulsed with appalling losses.

The rest of the Allied front was battered by artillery, and in places the Germans sapped towards the Allied line, which on the right had been reinforced by a battalion of the Honourable Artillery Company. A night attack under cover of the darkness, rain and mist near Givenchy was repulsed with heavy slaughter.

So soon as day broke on Wednesday, November 11, the German batteries north and south of the Menin-Ypres road opened " the most furious artillery fire that they have yet," says the British " Eye-Witness," writing on November 13, " employed against us." For three hours a hurricane of high-explosive and shrapnel shells beat against the British line. Immediately afterwards, through the fog, a column of fifteen battalions of the Prussian Guard advanced on the trenches in the Nonne Bosche Wood, west of the Polygone de Zonnebeke, while simultaneously, between the Menin-Ypres road and the Comines-Ypres Canal, a massed charge attempted by other troops was stopped by artillery fire. The Germans had been wrought up by the Kaiser's impassioned harangues into a state of feverish exaltation. Away to the left as far as the sea at Nieuport the Germans were continuing their offensives, and some of them had even crossed the Yser and waded through the floods. South-westwards, across the Comines-Ypres Canal to the ridge of the Mont-des-Cats, columns moved forward to drive the French through St. Eloi into Ypres. The ridge of the Mont-des-Cats, the valley of the Douve and the Ploegsteert Wood were also attacked, but south of the Lys the battle languished.

Of all the attacks that of the Prussian Guard alone met with any success. Riddled by frontal fire, taken in flank by artillery, rifles and machine-guns, the *élite* of the German Army still pressed onward, as they had done at St. Privat forty-four years before. Their progress was, indeed, very similar—slow but steady. " Vorwärts Preussen, immer vorwärts " was the cry, and although at Ypres, as at St. Privat, the losses were terrible, there was on neither occasion any thought of turning back. To oppose them, beyond the men already in the trenches, there were only two field companies of Royal Engineers, mustering perhaps some four hundred, and on the right front of the German attack was a British heavy battery and a field battery. The Prussians were within 100 yards of the guns. Unless a firing line of sufficient strength to stop a further advance could be established, the day was lost. Every available man was called up to help—gunners, regimental cooks and details of every description answered to the cry, and seizing their rifles were sent to open fire on the foe.

Calmly waiting till the range was so short that every shot must tell with fourfold deadli-

ness, the British stood grimly and silently ready. At the word of command a sheet of fire leapt from their muskets and a crashing volley tore through the German host. Again and again did the rifles ring out, mowing down rank after rank of the Prussian Guards. They hesitated, wavered, and then, leaving thousands of dead and wounded behind them, sullenly retreated. It had been a second battle of Inkerman and, like Inkerman, it had ended in a British victory.

The next day Sir Douglas Haig circulated among the troops the following order:

To the 1st Division, 2nd Division, 3rd Division, 1st Cavalry Division, and 3rd Cavalry Division.

G. 983, November 12, 1914.

The Commander-in-Chief has asked me to convey to the troops under my command his congratulations and thanks for the splendid resistance to the German attack yesterday. This attack was delivered by some 15 fresh battalions of the German Guard Corps which had been specially brought up to carry out the task in which so many other corps had failed—viz., to crush the British and force a way through to Ypres.

Since its arrival in this neighbourhood the 1st Corps, assisted by the 3rd Cavalry Division, 7th Division, and troops from the 2nd Corps, has met and defeated the 23rd, 26th, and 27th German Reserve Corps, the 13th Active Corps, and finally a strong force from the Guard Corps.

It is doubtful whether the annals of the British Army contain any finer record than this.

Never has praise been more justly earned.

At every other point the enemy was repulsed, and the next day by a night attack the French destroyed the Germans who had crossed the Yser.

With the rout of the Prussian Guard, who made one or two futile efforts on the 12th to retrieve their defeat, the Battle of Ypres may be said to have ended. The Kaiser, it has been calculated by competent authorities, had lost in the past month's fighting close on 300,000 men, and had nothing to show for this vast expenditure of human life. He had failed to break through to Calais; the Allied Army in Flanders remained thinned but unconquerable, and still held the barrier of trenches from Compiègne round Ypres to Nieuport which they had so gallantly defended. The British Army had emerged triumphant from one of the severest tests to which it had ever been subjected, the French and Belgians had once more shown their superiority over the Germans on the field of battle.

DRUMMER SPENCER JOHN BENT, V.C.

CHAPTER LXVI.

MEDICAL WORK IN THE FIELD AND AT HOME.

THE ARMY MEDICAL SERVICE—ITS READINESS FOR EUROPEAN WAR—NEW PROBLEMS OF MODERN WARFARE—THE ROYAL ARMY MEDICAL CORPS IN FRANCE—BASE HOSPITALS—THE RETREAT FROM MONS—THE BATTLE OF THE MARNE—PARIS AS A HOSPITAL CENTRE—AMERICAN HELP—THE BATTLE OF THE AISNE—BOULOGNE—WORK OF SPECIALISTS—HOSPITAL WORK IN ENGLAND—A DESCRIPTION OF NETLEY—OTHER HOSPITALS—THE SUPPLY OF DOCTORS AND NURSES—THE RED CROSS ORGANIZATION.

BY the morning of Wednesday, August 5, 1914, the morrow of Britain's declaration of war upon Germany, the whole British Army and Navy, including the Medical Services, had sprung to attention, and every measure which reason could then suggest as necessary for efficient care of the wounded had been taken. The public took, no doubt, some time to realize the nature of the coming war, and at first vaguely supposed that the struggle with Germany would begin with a shock of naval battle in the North Sea. Preparations were, indeed, made to receive wounded sailors at the East Coast ports—at Yarmouth, for instance, 200 beds were ordered to be ready by 2 p.m. on the 6th—but it soon appeared that the medical history of at any rate the first phases of the struggle would be the testing of our preparedness for a great European land war.

The work of reorganization begun after the South African War followed subsequently the lines of general military organization, of which the great feature was the preparation of an Expeditionary Force. Everything pivoted upon that, and the great war found the organization ready. The nucleus was the Army Medical Service. Around it was grouped an organization of the medical profession. When, as very soon happened, Lord Kitchener began the raising of new armies, the task before the War Office was to form a reflection of the system already applied to the existing armies.

There was a time in the history of nations when the work of caring for wounded men at the front and for the health of armies in the field was regarded as of small or secondary importance. At that period armies were not of great size, nor was the profession of arms the highly technical business which it has become in these latter days. If a man was wounded he ceased to be of use for the undertaking on which the army was engaged, and the chances were that before his recovery was complete a decision would have been reached. In any case, a sufficiency of fresh recruits could usually be obtained without difficulty. Moreover, if pestilence broke out the troops could be moved away to fresh ground, and the infection in this manner eluded to a certain extent.

As armies increased in size, however, and as weapons became more deadly, a new situation

ROYAUMONT ABBEY CONVERTED INTO A HOSPITAL.

Patients taking a sun-bath in the old gardens. Inset: Women surgeons performing an operation in the hospital theatre.

arose. The number of men who were injured increased, and the ratio between the killed and the wounded underwent a change. Wounded men began to have a potential value when new recruits were difficult to obtain in adequate numbers, and pestilences became a serious danger when it was no longer possible to escape from them, and when the campaign was likely to be of prolonged duration.

Napoleon certainly appreciated the new situation during the latter portion of his career, for on one occasion he ordered that no doctors were to be allowed in the firing line, and declared that "one doctor was worth 15 ordinary men." But in Napoleon's day military surgery was so primitive that the number of wounded men returned to the firing line was not at any time great. The discovery of the antiseptic method and the evolution of modern surgery were needful to endow the medical corps of an army with real military significance.

This new significance found its first recognition on what may be called a national scale in the Russo-Japanese War. The Japanese, as a scientific people, had noted the fact that in most earlier struggles, and especially in their own struggle with China, the proportion of men rendered *hors de combat* by bullets and shells was about 20 per cent. of the total casualties. The remaining 80 per cent. were driven from the fighting line by disease. Moreover, of the wounded many were rendered permanently incapable because their wounds became infected. The Japanese saw that if disease could be prevented, and all wounds could receive immediate and thorough surgical care the number of men constantly available for the firing line would be immensely increased. As a small nation with few reserves, they naturally regarded this discovery as being of the greatest importance, more especially since political events suggested that their opponent in war would be a people immensely superior to them in point of numbers.

Japan, therefore, organized her Army Medical Corps on a new basis; she gave great power to her medical officers and demanded great things of them. She equipped her forces with men of science, bacteriologists, and expert analysts, whose duty it was to examine wells, report upon drainage systems, select the sites

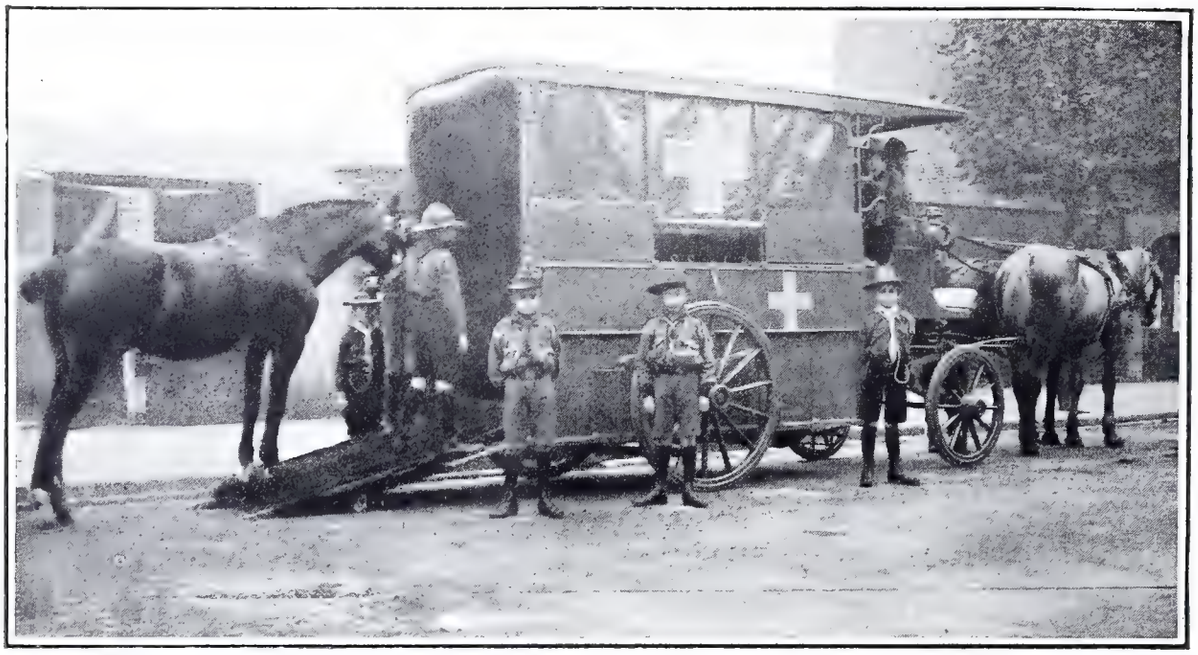
for camps, and discover infected persons and isolate them. As a result of these precautions taken before war broke out, she reduced her casualties in the most remarkable manner. Her final results showed that instead of 80 per cent. of the number of men rendered *hors de combat* being victims of disease, only 20 per cent. were so affected, while of the wounded a much smaller number than usual suffered from blood poisoning and other similar conditions.

The experience of Japan had not passed unnoticed by other nations. In Britain, however, there is little room for doubt that the process of improvement had not been carried far enough. She went into the war with a medical service which lacked nothing so far as personnel was concerned, but which lacked many things in respect of the demands which were soon to be made upon its equipment.

To some extent this was inevitable. So long a time had elapsed since the last great European war that the conditions of war in a temperate climate and upon a highly cultivated soil were not fully appreciated. Moreover, in the interval between 1870 and 1914 surgery and preventive medicine had become new sciences. It was scarcely possible to foresee exactly what the relationship between war and medicine would be or what new demands the new conditions might make. No one, for example, foresaw the important rôle which the soil of Europe was to play in the infection of wounds; the need for the rapid evacuation of immense numbers of wounded men which arose early in the campaign was not fully provided for; nor was

SIR JOHN FRENCH'S SISTER AS A NURSE IN FRANCE.

Mrs. Harley talking to some of her patients at Royaumont Abbey. General French's sister is in charge of the staff, which is composed of women.



WOUNDED HORSES.
The Ambulance Van.

it thought probable that every branch of medicine from dentistry to massage would be requisitioned before the war had lasted eight months. There was a tendency—no doubt the result of experience in South Africa—to regard war surgery as a straightforward business concerned chiefly with the dressing of wounds.

This tendency was apparent to initiated observers who happened to witness the disembarcation of the Expeditionary Force at Boulogne in August. Boulogne at that time was designated a hospital base. Large quantities of R.A.M.C. stores and equipment were brought to the town, and a hospital was established in the grounds of the ruined religious house on the hill above the walled city. In addition ambulance wagons of the old horse-drawn type were to be seen passing through the streets—wagons which earlier experience had sanctioned, but which even at this period looked somewhat out of date. It would probably be unfair to regard the hospital on the hill as representing the considered requirements of the authorities. It was not known at that moment whether or not it would be possible to hold Boulogne permanently, and in the circumstances it was obviously impossible to make elaborate preparations But the preparations which were actually made were on so small a scale as to suggest a tentative rather than an assured attitude. The evolution of the modern war hospital had scarcely begun.

The first hospital at Boulogne enjoyed a very short term ot existence. Within a few days of its opening the battle of Mons was fought, and the retreat through Northern France had begun. It became clear that Boulogne could no longer be used as a base for the treatment of the wounded or for their transhipment to England, and consequently orders were given to evacuate the town and proceed to Havre. During two days and nights a stream of wagons conveyed the stores and equipment back to the docks, the medical officers and orderlies went on board ship, and the development of hospital work received a sharp check.

Meanwhile at the front itself the Royal Army Medical Corps was face to face with the most tremendous problem which it had ever encountered. Mons had been a cruel awakening ; the retreat from Mons, in blazing sunlight through stifling August days, was of the character of an inferno. The soldiers described it tersely as "Hell on earth," and the medical officers had good reason to endorse that opinion.

From the doctor's point of view a retreat, no matter how orderly, is calamitous. The retreat from Mons left large numbers of British and French wounded in the hands of the enemy. The medical men attending the British were exposed to very great danger. They performed their work under fire during many successive days and nights. Almost superhuman exertions were required to get men removed through the retreating ranks to the

THE HORSE IN WAR.

Army Veterinary Surgeons attending to a wounded horse behind the fighting-line.

ambulance trains. The roads were congested with refugees and transport wagons, with the fragments of regiments, and with men who had lost their regiments; the railways were also disorganized and crowded with trains of every description.

It will stand to the everlasting credit of the Royal Army Medical Corps that in this terrible emergency it proved itself worthy of the trust reposed in it. The story of the heroism of individual officers during the retreat and subsequently at the battles of the Marne and Aisne is one of the brightest in the annals of the war. Many of these officers were afterwards decorated for their services; the Victoria Cross and the French Legion of Honour being in some instances bestowed.

It is a safe statement that no man ever won the Victoria Cross more nobly than did Captain Harry Sherwood Ranken, R.A.M.C. Captain Ranken was severely wounded in the leg whilst attending to his duties on the battlefield. He arrested the bleeding from this and bound it up and then continued to dress the wounds of his men, sacrificing his chances of salvation to their needs. When finally he permitted himself to be carried to the rear his case had become almost desperate. He died within a short period. His act of heroism was thus laconically described in an official statement made at the time when the V.C. was conferred:

"For tending wounded in the trenches under rifle and shrapnel fire at Hautvesnes on September 19 and on September 20, continuing to attend to wounded after his thigh and leg had been shattered."

During the fighting on the Aisne the Army doctors showed in many cases most heroic courage. The following account is typical of many received about this time:

It became necessary for the doctor to pass across a narrow ravine separating two trenches. The ravine was swept by the enemy's fire and those in the trenches were lying close. The doctor did not hesitate a moment, but made the hazardous journey. Not only so, but on five different occasions he recrossed from trench to trench, it having been signalled to him that his services were required.

It was during the period of the retreat that the first impression of the effects of modern shell fire was obtained. That impression astonished the medical world. It was found that the tremendous blast of air which followed the bursting of a shell produced severe injury to the lungs of the men standing near and also that men in the neighbourhood suffered from concussion, which in many instances killed them outright. This shell concussion produced such extraordinary effects indeed that after an engagement dead soldiers were found standing in the trenches or sitting in the most natural attitudes. Amongst the lesser effects of shell concussion observed were sudden blindness without injury to the eyes, deafness, and nervous prostration. In a few instances men seemed to become dazed and to pass into the sub-conscious state described by James and other psychologists.

The line of evacuation for men wounded during the retreat from Mons was, in the first

instance, through Amiens and Rouen. The scene at Amiens was one of confusion and tragedy. The platforms of the station were thronged with refugees from the Pas de Calais and the Lille district, peasants with their wives and children, and their small belongings tied up in bed-sheets or any other receptacle which could be obtained, well-to-do people with their servants and boxes, some of them distracted with anxiety, a few officials, and a goodly number of Americans. The station was also thronged with the soldiers of three nations, and every few minutes huge troop trains rushed through, the men leaning from the carriage windows and cheering. The

[*Gale & Polden.*

CAPT. H. S. RANKEN, R.A.M.C.

Who, at Hautvesnes, attended the wounded in the trenches after his thigh and leg had been shattered. He was awarded the V.C.

trains of British wounded rolled into the station all night long without intermission. These were the men who had sung their way so lightheartedly through the streets of Boulogne only a week earlier. They bore the evidences of the fearful ordeal through which they had passed. The trains consisted of trucks, on the floors of which straw had been spread. The trucks lacked proper braking arrangements, and when the engine stopped they bumped together with a clanking sound that was punctuated by the groans of the wounded men. The less severely wounded thronged the doorways of the trucks. They seemed, most of them, slightly dazed, but the dogged cheerfulness of the British soldier had not deserted them. They made light of their wounds, but the slow discomfort of the train was very hard to bear, and the jolting was terrible.

At Rouen the same scenes were being enacted. At the great terminus there many of the wounded were taken from the trains and conveyed by motor and horse ambulance to the hospital ships. All day and all night the trains arrived and the stretcher-bearers moved backwards and forwards across the narrow platforms. The orderlies behaved splendidly, but it was quite clear to everybody that vast changes of organization were needful. The modern battle, with its huge casualty lists, demanded a new conception of ambulance work.

The hospital ships lay alongside the quays. They were vessels taken from the Irish passenger service, and had been painted a dull slate grey. They were comfortably fitted up and represented luxury after the ordeal of the trucks. Nevertheless, for wounded men who had spent several days and nights in a goods train the prospect of a sea voyage was not without its terrors. Many of the broken bones had been but hastily set; the dressings were of a temporary character. There is reason to think that some of the wounds had not been dressed since the first battlefield bandage was applied to them. It was the best which could be accomplished in the circumstances, but it was very far from being a satisfactory state of affairs.

Havre, meanwhile, had been turned into a hospital base. The stores and equipment which had been sent in the first instance to Boulogne had now arrived at the port. The huge dock-shed on the quay wall where the boats from Southampton were usually berthed was taken over for R.A.M.C. use, and the hospital trains which were directed upon this place arrived here. Hospital ships lay also at Havre, and embarcations similar to those witnessed at Rouen were carried on day and night. At Havre, as at Rouen, there was ample evidence that changes of a radical character were needful. The most hopeful sign for the future was the splendid devotion and tireless self-sacrifice of the doctors, nurses, and orderlies.

HOT FOOD FOR THE WOUNDED.

The Motor Field Kitchen: Serving out soup to the wounded.

THE RED CROSS IN FRANCE AND BELGIUM.

Removing the wounded to a hospital on the Seine —Lowering a wounded soldier into a barge used as a temporary open-air hospital (centre) and bringing in the wounded to Ostend (bottom).

Just as the retreat from Mons had furnished evidence of the effects of modern shell fire, so the long journey to the coast revealed the complications which the soil of France had introduced into war surgery. These complications were of a bacteriological nature. The soil of France has been highly cultivated during hundreds of years. The soil is richly manured. In this manured soil the germs of tetanus (lockjaw) and of gaseous gangrene find their most suitable breeding ground. The wounds received on this soil were poisoned in almost every instance and within a few days symptoms of poisoning became apparent. On the way down from the front, and in the hospital ships, cases of tetanus began to be met with and severe gangrene often set in. Because it was impossible during a journey to handle the latter condition in a thorough manner many soldiers lost their lives, in other cases limbs were lost as the result of amputation. It became abundantly clear that a long railway journey undertaken in circumstances which precluded proper surgical attention was fatal to the wellbeing of the soldiers; it became clear also that some measures would have to be taken to guard against the peril of tetanus.

Unhappily, the military situation at that moment rendered drastic changes in the medical service almost impossible. The Allied Armies were still falling back towards Paris, and there was a distinct threat on the part of the enemy to cut off the peninsula of land at the most westerly point of which Havre is situated. It was not known from day to day whether this threat would or would not be translated into action. In consequence, the medical authorities, both at Havre and at Rouen, had orders

Reading to a Wounded Soldier.

Afternoon Tea.

THE ASTORIA, PARIS, CONVERTED INTO A HOSPITAL.

to be ready for an immediate evacuation. They could not hope to enlarge their organization or complete their arrangements so long as the uncertainty remained.

The event proved that this readiness to move was very necessary. As the German Army approached Paris, Havre became impossible as a hospital base. Orders were given for its evacuation, and within a few days the hospital equipment had been put on board ship for St. Nazaire.

This second move had the immediate effect of lengthening considerably the line of evacuation for the wounded. It had thus the effect of accentuating all the difficulties and all the dangers already encountered. Wounded men had now to spend several days and nights in the trains, and what may be described as the bacteriological problem became more acute.

But a change for the better was at hand. Already a great deal of attention had been attracted to the condition of the wounded, and efforts were being made both at home and abroad to cope with the problem.

The first fruit of these efforts was the establishing of dressing stations on the railways. These stations were conducted by nurses and other charitably-minded persons. They consisted of small booths placed in wayside stations. When the ambulance trains arrived fresh dressings were applied to severe wounds and wine and chocolate distributed.

The British Red Cross Society played its part in initiating this good work. The *Times* Fund had just been opened (August 31), and appeals were being made daily to the people of England for help. "The British Red Cross Society," one of these signed by the late Lord Rothschild, Sir Frederick Treves, and Mr. Ridsdale, ran "supplements the aid provided by the State for our sick and wounded. Auxiliary hospital accommodation, auxiliary medical and nursing service, and all the little luxuries and comforts which mean so much to the invalid on his bed of pain the society organizes and supplies." It is no exaggeration to say that that appeal and those which followed it inaugurated the greatest private work of mercy which has ever been undertaken. The *Times* Fund was begun exactly at the critical moment. Within a few weeks, as will be seen, it had grown to vast dimensions. It played a great and worthy part in the complete change of situation which was soon to take place.

Before leaving this part of the history, a description of the removal of a wounded soldier from the battlefield to the base hospital which was contributed to *The Times* by a medical correspondent may be quoted:

The wound was caused by a bursting shell, a piece of which was driven into the flesh of the thigh, inflicting a severe gash. The soldier collapsed at once and lay at the bottom of the trench, bleeding freely. He was dazed by the concussion. Happily a doctor was at hand creeping along the trench at his hazardous work. With the help of a man of the Royal Army Medical Corps he raised the injured limb, cut away the trouser leg and applied a temporary antiseptic dressing and bandage. . . .

The wounded soldier, left to himself, gradually recovered full consciousness. At first his wound did not hurt him very much because the blow had deadened the sensitiveness of the nerves, but after a little time the pain became severe—a dull persistent throbbing, growing more and more acute.

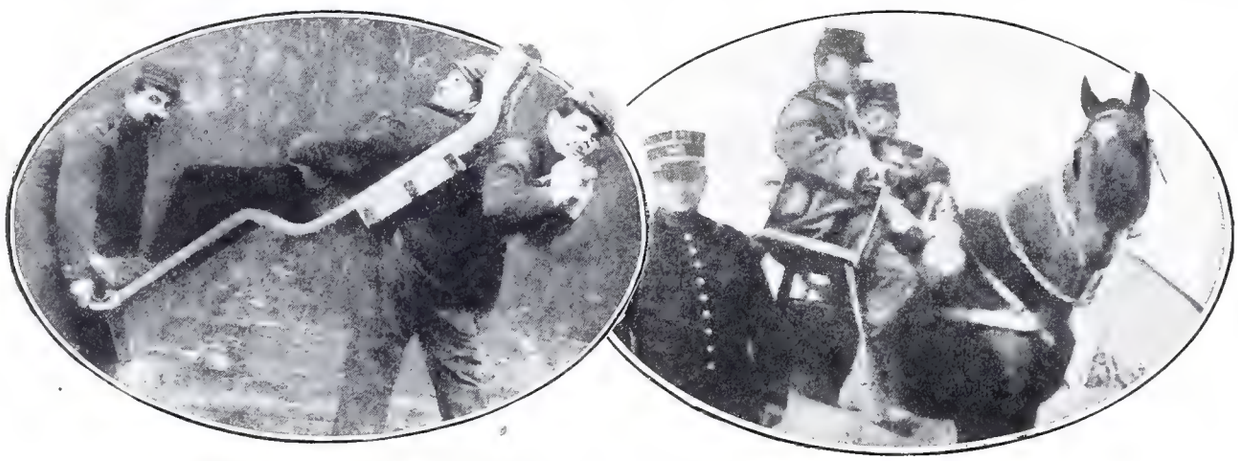
This stay in the trenches reduced vitality and shattered resistance. Loss of blood, pain, shock, hunger, cold, and damp all exacted their toll of strength, so that when night fell and the enemy's fire abated a little it was a very weak and broken man who was "collected" by the stretcher-bearers and carried back through the dark woods to the "regimental aid post" and thence to the "Clearing Station." This station was a village church, which had been improvised as a hospital. The floor of the building was covered with straw, on which the stretchers were laid side by side.

Doctors attended to the wounded here; food was served and treatment given as far as was possible. But the number of men requiring help was very great. The doctors were tired out and overworked, and fresh cases were arriving every moment, many of them demanding immediate and long attention. Our wounded soldier was covered with a blanket and left to go to sleep. He could not sleep, and spent an uneasy night. The groans of his fellow-sufferers were harrowing, for there were some terribly shattered men in that hospital.

Next day he felt feverish and ill. It was, however, necessary to remove him from the Clearing Station as there were more cases coming down and the accommodation was limited. His dressing was attended to, and he was placed in an ambulance along with other cases and conveyed over a rather rough road to a place where an ambulance train had been drawn up in readiness. Arrangements had been made for swinging stretchers inside the trucks of the train. The stretcher cases were accommodated, some on swinging places, others on the floor. Four doctors and a body of ambulance men accompanied the train.

A period of several hours was required in which to entrain the full complement of wounded. This was a very weary time, for, of course, dressings could not be attended to, nor could pain be alleviated except in a perfunctory way. The rate of travel when the train at last began to move was very slow and there were frequent delays. These stoppages were usually abrupt, there being no system of air-brakes. Many of the patients complained bitterly of the shocks and joltings, but it was recognized that these were unavoidable. At intervals the doctors accompanying the train made visits of inspection. They did all that was possible to alleviate distress and discomfort. Also there were occasional rests at stations by the wayside, where nurses and helpers of various kinds waited to bestow wines and warm drinks, chocolates and cigarettes. Dressings could also be attended to here in case of great need. . . .

The journey lasted about a day and a night. (Many of the journeys lasted much longer than this.) At certain places wounded were removed from the train to be taken by motor ambulance to hospitals. These men were to be envied, because life in the train was very trying for men who had already been subjected to the fierce penalty of the trenches and in many cases were the victims of inflammations of their wounds. These inflamed wounds are exquisitely tender. The weariness and exhaustion were profound. A man lived in a kind of feverish nightmare through which rumbled unceasingly innumerable wheels moving by jars and jolts.



TWO FRENCH METHODS OF CARRYING THE WOUNDED.
On the back of the soldier, and on horseback.
This form of stretcher, owing to its zig-zag nature, prevents jolting.

During this period work at the Front itself was carried on with the greatest energy and self-sacrifice, and this often in face of grave difficulties. The organization was good and the enthusiasm of the personnel suffered no diminution. Each unit had its own regimental doctor, who accompanied it, in most instances, into the trenches, sharing all its hardships and dangers. It was the doctor's duty to creep along the trench during an engagement and give help to any man who might be wounded. The work was of a very hazardous character indeed, as the casualty lists plainly showed.

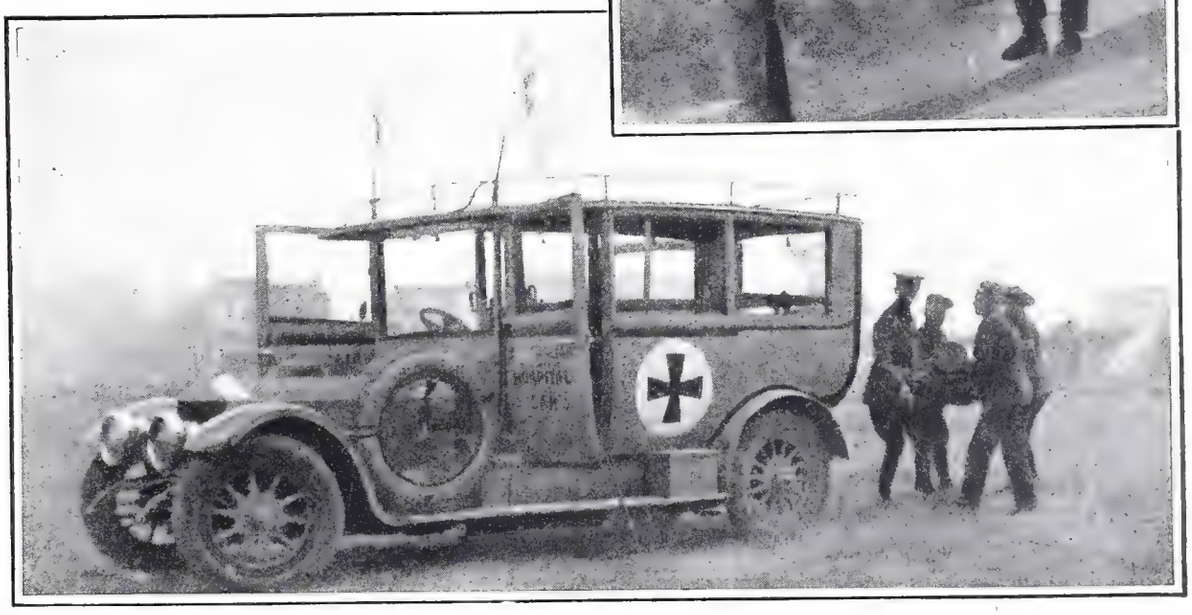
In addition to the doctor there were the bearer parties of the field ambulances, whose duty it was to carry wounded men back from

THE RED CROSS ON THE BATTLEFIELD.
Going out to collect the wounded.

the trenches to the tent sections of the field ambulances. These tent sections were in reality small hospitals fitted up in such a manner that it was possible to perform urgent operations in them. Thanks to this fact many very severe cases received a measure of immediate attention. The development of these urgent case hospitals was destined to prove one of the most important features of the new epoch in war surgery. From the tent sections patients passed to the Clearing Stations, as has already been described, and thence to the trains.

Upon the state of affairs already outlined the battle of the Marne and the retreat of the German Army under General von Kluck which followed it exercised a profound effect. The battle of the Marne delivered Paris. It rendered Havre and Rouen possible as hospital bases; and it also gave the Allies a breathing space in which to set their house in order. On the other hand, it threw upon the Royal Army Medical Corps an immense amount of work and rendered the congestion which had followed the Great Retreat still more difficult a problem.

Paris had now again become the great centre alike of supply and of relief. French and British wounded were pouring into Paris. The need for hospital accommodation in the capital became acute.



THE RED CROSS ON THE BATTLEFIELD.
Carrying the wounded to the motor-ambulance.

NURSES AT WORK.
Carrying a wounded Belgian.

Several agencies set to work to satisfy that need. The Royal Army Medical Corps opened a hospital in the Hôtel Petit Trianon at Versailles. In Paris itself a magnificent hospital was opened under the auspices of the British Red Cross Society, and men and women doctors freely lent their aid. In addition, the British Hospital in Paris opened its doors to the wounded soldiers.

Meantime several prominent Americans in Paris had decided to undertake work for the wounded. Amongst these was the American Ambassador, Mr. Herrick. They constituted themselves a committee and set to work with great energy, and the story of their labours furnishes one of the romances of hospital work. The first step was the securing of a suitable building. This was obtained as early as August 12 from the French Government. The Lycée Pasteur, at Neuilly, was a large school in course of being built; it was not expected that it could be opened until the late autumn. The American Committee took the Lycée Pasteur in hand without a moment's delay. Windows were fitted to empty frames, doors adjusted, the dust-covered floors were swept clean, and the walls whitewashed; electric light and baths were installed and immense classrooms partitioned off to form snug wards; a beautifully equipped operating theatre, an anæsthetic room, a sterilizing room, an X-ray department, and a dental clinic were provided.

The American Committee described this hospital as a "gift to humanity." A most pleasing feature was the amount of work accomplished in the hospital by Americans themselves, and that without distinction of class. At the hospital doors acting as concierges were two eminent painters; distinguished engineers, professional men, business men, scholars, and artists worked in the various departments. Many illustrious physicians and surgeons gave their services, while among the nursing and auxiliary staffs there were names which were known throughout Europe. A rigid silence was preserved as to the identity of these workers, it being felt that each was giving according to his or her capacity and without desire for the reward of publicity.

The organization of the hospital was remarkable. It was so good that it deserves description in detail; upon this plan all the great war hospitals were afterwards conducted. Indeed, it is true to a great extent that the Americans led the way in the great new movement towards the perfect military hospital which the war initiated.

When the hospital was opened it was felt that there was an urgent need of means of quick conveyance from the battlefield to the wards. The railways, as has already been pointed out, were congested with traffic of all sorts. Delays there were inevitable. But the roads were much less congested, and the possibility of using ambulance cars to a greater extent than had hitherto been contemplated presented itself to the minds of those in authority, particularly as the distance from Paris to the firing line was at that period comparatively short.

Some dozen "Ford" cars had been presented to the hospital. These cars were very light and could climb very steep banks on their low gear. Thanks to a happy inspiration, it was found possible to construct for each car an ambulance body out of the packing case in which the vehicle had been shipped. This work was performed gratuitously. These ambulance bodies cost very little and accommodated two wounded men lying down and four seated.

The effect of a bath and a suit of warm clean

ON THE WAY TO SERBIA.
Sir Thomas Lipton and Nurses on board the "Erin."

clothes upon arrival was remarkable. It was a psychological effect. The soldiers, feeling that they were being cared for, resumed their self-confidence and gradually returned to a normal state of mind. The wards of the hospital were very bright and cheerful, while the operating theatre was equipped in the most modern style. Full use was made of X-rays in the localization of bullets and pieces of shrapnel, and specialists were in attendance to deal with wounds involving special senses.

Moreover, every patient admitted to the Lycée Pasteur had his mouth examined by a dentist. In very many cases the teeth were found to be decayed or defective and to require cleansing. Every mouth was immediately put in a healthy state. Injuries of the jaws, too, received treatment at the hands of a dentist, and thus many remarkable results were obtained. Plastic surgery was practised at the American Hospital, and in cases where severe injury of the face had taken place proved to be a valuable means of healing. All manner of patients were admitted to the wards: these included Frenchmen, Algerians, Moroccans, Englishmen and German prisoners. The Astoria Hospital was also a very fine institution. The patients lay in palatial surroundings and lacked for nothing. As time went on every manner of modern comfort was supplied.

The period of the greatest activity of the British hospitals in Paris coincided with that during which the battle of the Aisne was being fought, that is to say during the last three weeks of September. Several important lessons were learned during this period. In the first place it was seen that measures must be taken to cope with the dangers of soil-infected wounds. It was clearly impossible to prevent soil-infection; on the other hand there was reason to think that early injections of anti-tetanic serum influenced these cases favourably. Efforts were made to administer the serum to all patients suffering from wounds which had been badly contaminated, and in this way the tetanus danger was certainly minimised.

Dr. Delorme, Principal Medical Inspector of the French Forces in the field, addressed the Academy of Science at Paris on September 28, and discussed this question. He said that if men could not be picked up until long after they had been wounded the responsibility rested with those who were making use of barbarous methods of warfare. The *moral* of the wounded

RED CROSS IN SERBIA.
The American Hospital at Belgrade.

MISS JESSIE BORTHWICK AND MR. H. WHITWORTH.

Miss Borthwick, together with the Dowager Lady Suffolk, Lord Methuen, and Sir Robert Anderson, organised the Little Allies' Ambulance Corps which did good work in Belgium.

was perfect. In cases of shell wounds which had been inflicted some hours previously, antiseptic treatment, and if necessary amputation, should be carried out at the front in order to prevent the possibility of gangrene and tetanus. Bullets should be extracted as soon as possible and the wound cleansed with oxygenized water. Should symptoms of gangrene show themselves, in addition to ordinary incision a double row of injections consisting of a 25 per cent. solution of sulphate of magnesia to minimise convulsions might be made and anti-tetanus serum also injected. Dr. Delorme advised that this serum should in any case be given as a prophylactic, and stated that Dr. Roux, of the Pasteur Institute, had already prepared 160,000 doses of the serum in case of need. The serum should be carried by ambulances at the front, and the wounded should be injected with it before being sent down to base hospitals.

Dr. Delorme's advice was taken. In addition surgeons began to find that their peace-time methods required revision in view of the altered conditions. The aseptic form of surgery was no longer adhered to. Aseptic surgery aims at keeping a wound scrupulously clean. This, in cases where wounds were already poisoned with dirt and earth, was manifestly impossible. It was found necessary to resort to antiseptic methods and to introduce into wounds substances capable of killing the organisms which had begun to multiply there. As most of these organisms belonged to what is known as the anäerobic type—that is to say, the type which is inhibited by the presence of air—oxygen and oxidisers were the best antiseptic agents. Wounds, too, were kept open, and opened up freely so that as much air as possible might be admitted and free drainage provided for.

A second lesson was that specialists were required in every military hospital. There were injuries of the eye to be attended to, and injuries of the ear, teeth, joints, and other members and organs. If the wounded men were to have justice it was needful to refer these cases to men who had made life-long study of them. Writing to *The Times*, a medical correspondent said :

> The need for absolutely first-class surgery may be illustrated by three cases which I saw in Paris. The first of these was a young officer, one of the most magnificently well-built, handsome men I have ever set eyes upon. He had been wounded in the head by a piece of shrapnel, with the result that he lost the power of one arm, the ability to hear anything and to speak a single word. When I saw him he was able to hear and to understand and could also articulate, though with difficulty.
>
> The operation in this case was performed by a very distinguished surgeon ; it was completely successful ; the patient is recovering, and will, it may be hoped, complete his recovery. Another case similar to this one was that of an officer who developed enteritis and then appendicitis as the result of long exposure in the trenches at the River Aisne. Here again operative measures of a special kind were necessary. The third case was one of gangrene of the leg, where operation under good conditions saved life.

A third lesson was the need for immediate case hospitals near the front. The use of churches and other buildings was of course the only solution of this difficulty during the early days of the campaign, but during the "Paris

DUTCH RED CROSS.

A nurse tending a wounded Belgian in the old Augustinian nunnery which was turned into a hospital.

FRENCH AMBULANCE WORK.
An X-Ray apparatus.

period" it was possible to improve upon this state of affairs by opening units at various towns and villages behind the lines. There was, for example, a hospital at Villiers Cotterets behind Soissons. These hospitals were very well equipped and were staffed by surgeons of experience. They served as centres to which grave cases could be taken and where they could be treated forthwith. In this way the ordeal of a journey to Paris was avoided, and no doubt many lives were saved which would have been lost had this journey been necessary.

Finally it was seen how great a need existed for a large number of ambulance cars. The Red Cross Society and Order of St. John performed in this respect a work of the greatest value. Through the medium of *The Times* newspaper an appeal was made for ambulance cars and owners of private cars were invited to give their vehicles.

The response to the appeal was immediate, and very soon a large number of cars had been placed at the disposal of the military authorities. These were used to bring the wounded from the Aisne to Paris and Versailles. Towards the end of the first week in October the ambulance part of the Army Medical Service was working as smoothly as were other departments. Indeed it looked as though the problems which had arisen in such profusion during the retreat from Mons had been solved. The evolution of the new war surgery seemed to be on the way to completion. The situation, too, was improved by the reopening of Rouen and Havre as points of evacuation for wounded men returning by hospital ship to England. Even the ambulance trains were better, good corridor carriages with beds in them having been substituted for the improvised trucks.

Unfortunately, the medical is always determined by the military situation.

With the opening of hospitals in Paris and south of Paris, a great improvement took place. But, unhappily, a new test awaited the Royal Army Medical Corps, a test even more severe than that experienced during the weeks of August. This was the sudden lengthening of the line from the Aisne to the North Sea.

That military operation took place with great rapidity, and in face of severe opposition. While it may have been possible to foresee it, it was certainly not possible to provide against it in a medical sense, because any extensive hospital preparations at Boulogne would have acted as a signal of alarm to the enemy. Our doctors had, therefore, to begin over again. They were faced during the great battle of Ypres with an enormous number of wounded men who were rushed down from the Front, as it were, "all together." There was no time to bring up hospitals from Paris or elsewhere even had this been possible. (It was not possible because these hospitals were full of patients and working at high pressure.) It was, therefore, necessary to set to work and evolve a new solution of a new problem.

But the lessons of the past had been taken to heart. Motor ambulances were now available; a large number of them had arrived in Paris; they were immediately dispatched to "an unknown destination." In other words, they went up to Flanders and were arriving

A MOTOR-CYCLE AMBULANCE.

day by day in Boulogne. Moreover, *The Times* Fund for the Sick and Wounded was in existence and large sums of money were, therefore, immediately available. The money was called for and spent, and immense quantities of stores were sent across to Boulogne to equip the new hospitals being opened out.

The situation in Boulogne was, indeed, a difficult one. The new ambulance trains which were now available, and which cannot be praised too highly, rolled into the station all day and all night. Severely wounded men were disembarked in hundreds, and the hundreds soon mounted to thousands. Where were these cases to be housed? How were they to be dealt with? Many of them were in dire need of help; operations were called for immediately; tetanus and gas gangrene were still being met with. The hospital ships could scarcely overtake the work thrown upon them and it was rightly felt that the policy of sending all cases on board ship without previous treatment was a bad one.

The Royal Army Medical Corps rose splendidly to the occasion and was well supported by the Red Cross Society and the Order of St. John of Jerusalem. One after another hospitals were opened and equipped. The great casino at Boulogne became a hospital; so also did many of the hotels; a clearing hospital was opened on the Gare Maritime beside the hospital ships. At first the stretchers were laid upon the floors; soon, however, beds became available. The staff worked day and night, denying themselves respite of any sort. Within an incredibly short space of time operating theatres had been improvised, stocked and opened. X-ray rooms sprang into being so soon as the apparatus was landed from England; distinguished surgeons, bacteriologists and radiographers, to say nothing of dentists and specialists, were welcomed into the service and hurried to the scene of action. Laboratories were opened and the study of wounds and the means for dealing with them began forthwith. In ten days the crisis had been met and was passed.

A picture of the old town during these days is worth reproducing: "The streets were full of anxious faces. Along the streets, across the swing bridge over the harbour and down the quays moved a perpetual line of ambulance cars, those coming from the station going very slowly because of the sorely wounded men they carried, those returning passing at full speed. At night the procession of sorrow had not stopped. The headlights of the cars moved backwards and forwards in the autumn darkness, recalling the lights seen on the field of battle after a heavy engagement. Hospitals seemed to spring up by magic; the town became a hospital city within a few days, and this character was extended to the adjacent villages, so that Wimereux to the north and Etaples, Le Touquet, and Abbeville to the south shared in the good work. The ambulances from the Australian hospital at Wimereux became a familiar sight in the streets. Finally an Indian hospital was opened in the old religious house on the hill above the town, the same which had been used for this purpose by the British on their first landing in August."

It is a safe estimate that 25,000 wounded men were dealt with in fifteen days. These fifteen days saw Boulogne develop into the greatest hospital base in our history, and the most perfect. It is worthy of note that the officers of the Indian Medical Service co-operated with those of the R.A.M.C. in Boulogne and gave new proof of their splendid organization and abilities. Their work was done in the Indian hospitals.

In order to understand the perfection now reached, it is necessary to view the French port as the centre of an immense system comparable in its complexity to a spider's web. Boulogne stood between England and the front; to Boulogne came the hospital trains from Hazebroucke and Poperinghe and the hospital ships from the British ports. In Boulogne were the means of handling the severe cases which could not with safety be embarked at once. Boulogne was also a sorting-house in which cases were

The credit belongs not to one worker, but to all. Yet certain names must be mentioned. The first Commission which went to Belgium, and afterwards visited Paris, Nantes and Rouen, was presided over by Sir Alfred Keogh, who later became Director-General of the Army Medical Service at the War Office. After Sir Alfred Keogh had been translated to his new post, the Commission was reconstituted and expanded, and Sir Arthur Sloggett became Chief Commissioner. Later Surgeon-General Sir Arthur Sloggett went to Headquarters and Sir Courtauld Thomson went out as Commissioner to Boulogne, where he performed splendid work. He was compelled by ill-health to retire, and Sir Arthur Lawley succeeded him.

During the crisis caused by the first battle of Ypres Colonel E. H. Lynden Bell, C.B., was A.D.M.S. at Boulogne, and to him belongs much of the credit of having solved the great difficulties presented.

In order to appreciate the great progress achieved, it will be well to follow a wounded man from the front at Ypres in, say, the month of January, 1915: He was wounded in the trenches and from there conveyed at night by stretcher-bearers of the Royal Army Medical Corps to a first-aid post. Here a medical man dealt with his immediate needs. He was then placed in a horse ambulance and taken to a field ambulance. These field ambulances were no rough-and-ready contrivances, but hospitals, well equipped and staffed and capable of dealing in a satisfactory manner with cases of great urgency. At the field ambulance he received perhaps a dose of anti-tetanic serum as a preventive measure. If capable of being moved he was then loaded upon a motor ambulance, and brought down either as a "lying" or a "sitting-up" case to the clearing hospital used by the Army as a base. Treatment awaited him again here. Then, still in the motor ambulance, he was conveyed to the rail-head and placed in a hospital train.

This was not the hospital train of Mons or even of the Aisne. It was a splendid hospital on wheels, specially designed and built in England for the transport of wounded men. The coaches were long and heavy; they were painted a "khaki" colour. Each coach had a central corridor flanked by real hospital beds supported on racks. The beds could be lifted out of position and carried outside the coach, so that being lifted from the stretcher and placed on the bed was an easy and painless business. Each coach had its own water supply, and hot drinks were available night and day; there was also an operating theatre on the train and a dispensary; and there were kitchens and staff rooms, a large store and complete washing arrangements.

In their clean and comfortable vehicles the wounded man and his companions lay at ease; doctors and nurses were in attendance on them day and night, and the length of journey by rail mattered very little. Thanks to the excellent springing of the carriages and to their powerful brakes, there was no jolting or shaking, and the journey was robbed of all terror. At Boulogne the train was met by parties of stretcher-bearers, infantry details specially trained for the work, who conveyed the wounded quickly to waiting motor ambulances,

WATER ON THE MOTOR.
A contrivance by which water can be carried in a tank and can be heated when required.

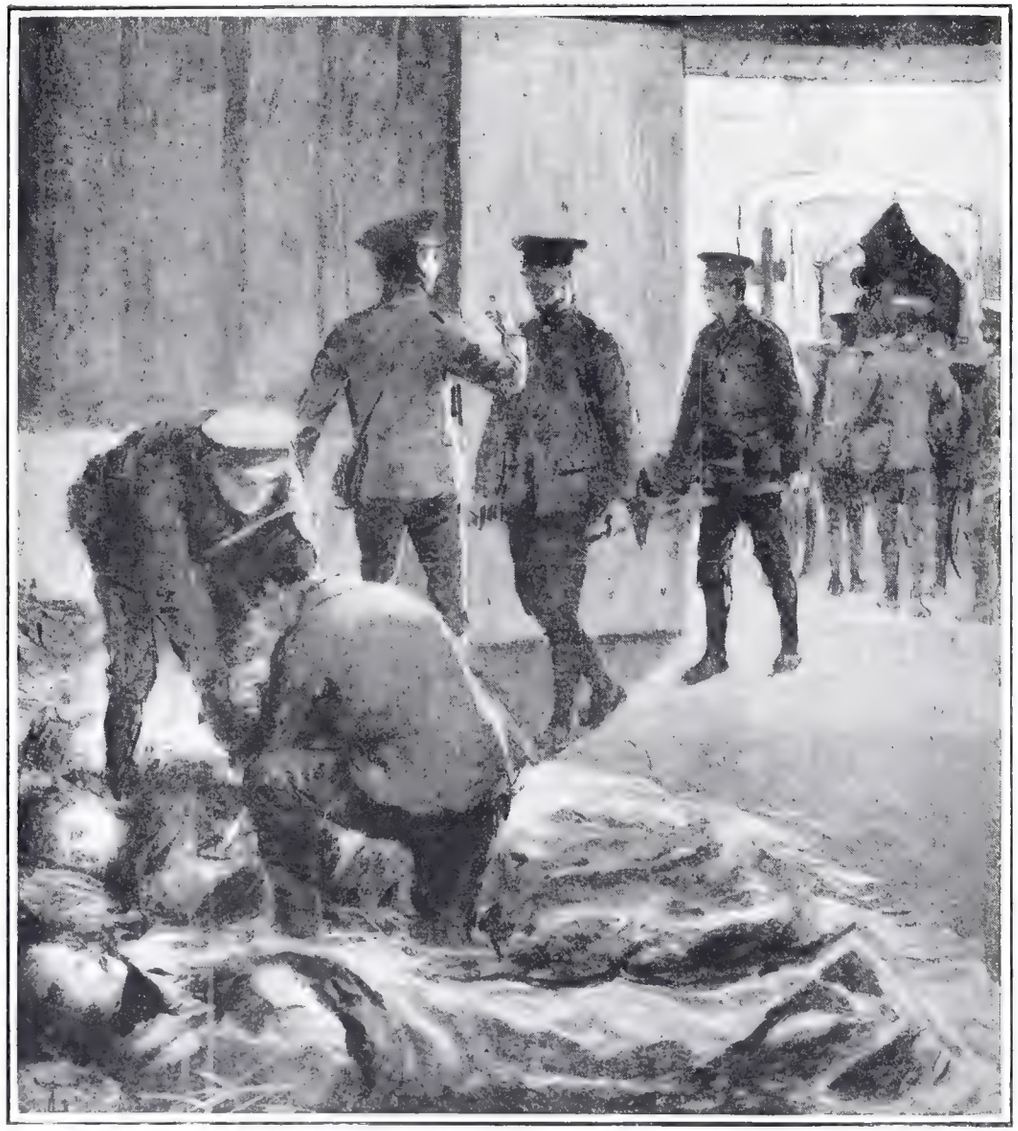
and in these they were removed to one or other of the great hospitals.

The hospitals were no longer merely houses full of wounded. They had become places of healing. Each hospital had its X-ray room in charge of a skilled radiographer. When the bullet or piece of shrapnel had been located it was removed in an operating theatre as well furnished and equipped as any in London. Trained sisters and nurses attended the operation, and the anæsthetic was administered by a qualified anæsthetist. The wards were airy and well lit, and scrupulously clean; they contained good beds with fine bed linen. Each man had his own locker and table. There was special cooking for the sick, and the food generally was of the best quality; those able

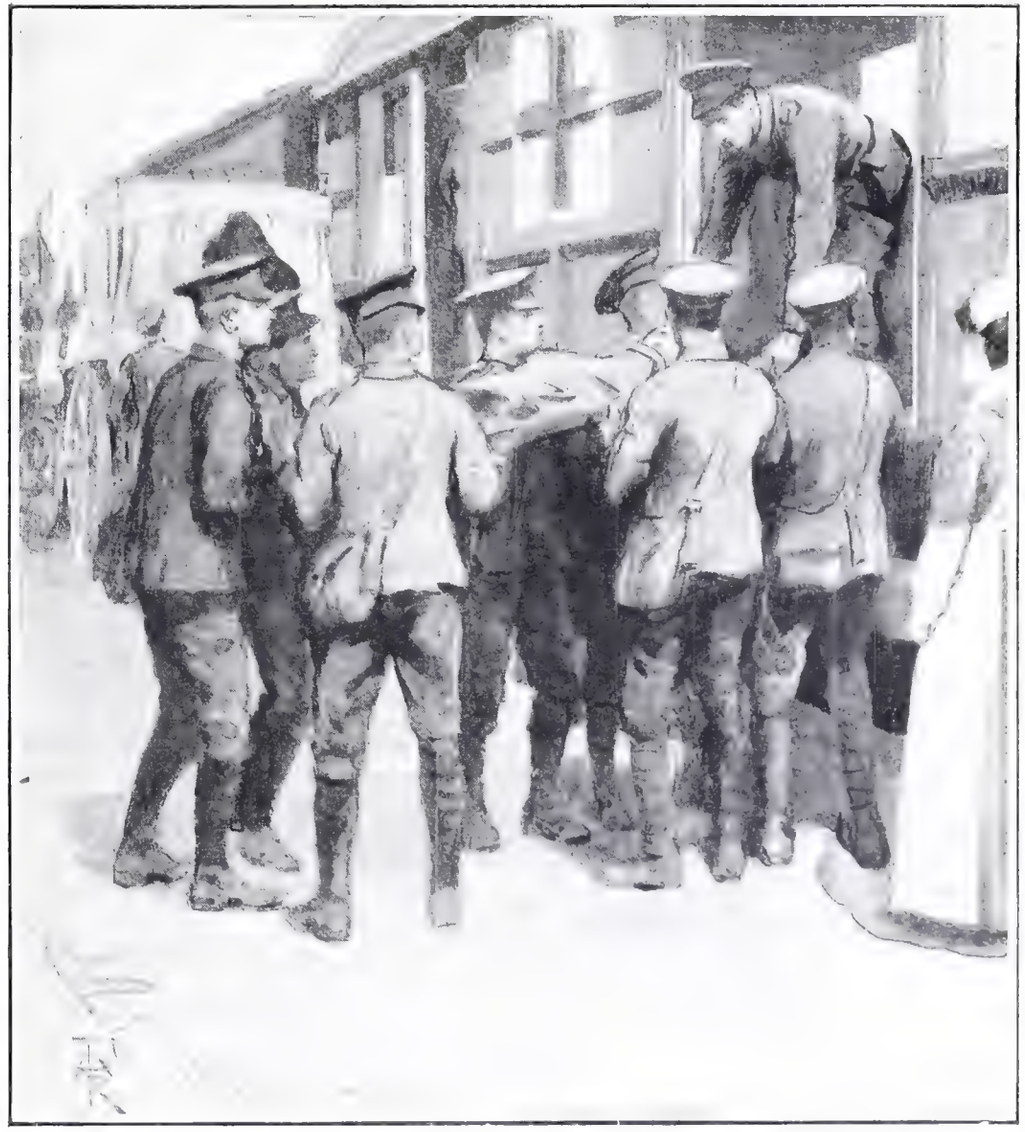
Stretcher-bearers in the rear of the firing line picking up the men as they fall.

Arrival at the Dressing-Station, whence, after further attention, the man is removed to the Clearing Hospital.

THE WORK OF THE ROYAL ARMY MEDICAL CORPS ON THE BATTLEFIELD.



The Clearing Hospital, where the case is examined by a senior officer of the R.A.M.C., who operates, if necessary.



The wounded man is removed by train to the Base Hospital, where, if necessary, arrangements are made for shipment home.

THE WORK OF THE ROYAL ARMY MEDICAL CORPS ON THE BATTLEFIELD.

to smoke had cigarettes, and workers attended to write letters home to friends. Chaplains, too, visited the sick regularly.

All manner of special treatments were available. If it was a jaw injury which had to be dealt with, a dentist was at hand to make plates and fixtures; if an injury of the eye or other special sense, a specialist eminent in that particular work saw the case. And in the laboratory attached to the hospital any special work connected with the wound was carried out and, if necessary, a vaccine prepared against infection.

The case, too, was sorted out from other cases according to its character. If it was a light case it might remain till cured and then either go back to the Front or go to a convalescent home; if a case likely to take a long time to heal it was dispatched by ambulance car and hospital ship to England; if a very grave case all action was deferred. No man was moved until his condition warranted the step, and so no man suffered the least aggravation of his condition.

And this great work moved as on oiled wheels, without apparent difficulty. To its accomplishment the most distinguished medical men lent their assistance. It would be invidious to mention names, but as an instance the work of Sir Almroth Wright may be referred to. Sir Almroth set himself in his laboratory in the Casino Hospital (No. 13 General) to investigate the nature of the modern wound, and his work was of the greatest importance. It was soon recognised to be important by his professional brethren. Sir Almroth isolated and cultivated the microbes of the various poisonous conditions met with in wounds. In a contribution to the medical Press he stated his belief that it was impossible completely to disinfect projectile wounds by means of antiseptics. The first stage of a projectile wound was often one of "imprisoned discharges." That stage came before efficient surgical treatment had been instituted. Sir Almroth showed how surgery may assist the natural efforts of the body and suggested certain means to be employed; for example, dressings which stimulate the flow of lymph in a wound and so bring the antagonistic qualities of the blood fluid into play: 5 per cent. solution of common salt with a little citrate of soda added.

Vaccine treatment of wounds was advocated chiefly as a prophylactic, as, for example, typhoid inoculation might have been advocated; it

THE AMERICAN HOSPITAL IN PARIS.

The room in which the bandages are prepared. The top picture shows Miss Vera Arkwright, and Mrs. E. Whitney of New York.

DUCHESS OF WESTMINSTER'S HOSPITAL AT LE TOUQUET.

The operating theatre inside the Casino, which was turned into a hospital; view from the grounds (centre). Baking the bedding and clothes of typhus-stricken soldiers (bottom picture).

was also advocated in cases where inflammation, like erysipelas, had sprung up near a wound, and finally in the treatment of a well-drained wound. In other cases the results Sir Almroth had met with were disappointing. He spoke also of "antisepsis vaccine" of which he had a store available. Amongst other well-known specialists at work with the Force were Sir G. H. Makins, Sir John Rose Bradford, Sir Bertrand Dawson, Sir A. MacCormick, Sir Victor Horsley, Sir A. Bowlby, and Sir W. Herringham.

To this historical survey must be added a short note regarding the first great test of the newly-evolved hospital system. That test came in the spring of 1915, first with the battle of Neuve Chapelle and later with the second battle of Ypres—for it is to be understood that during the first battle of Ypres the system was still being evolved.

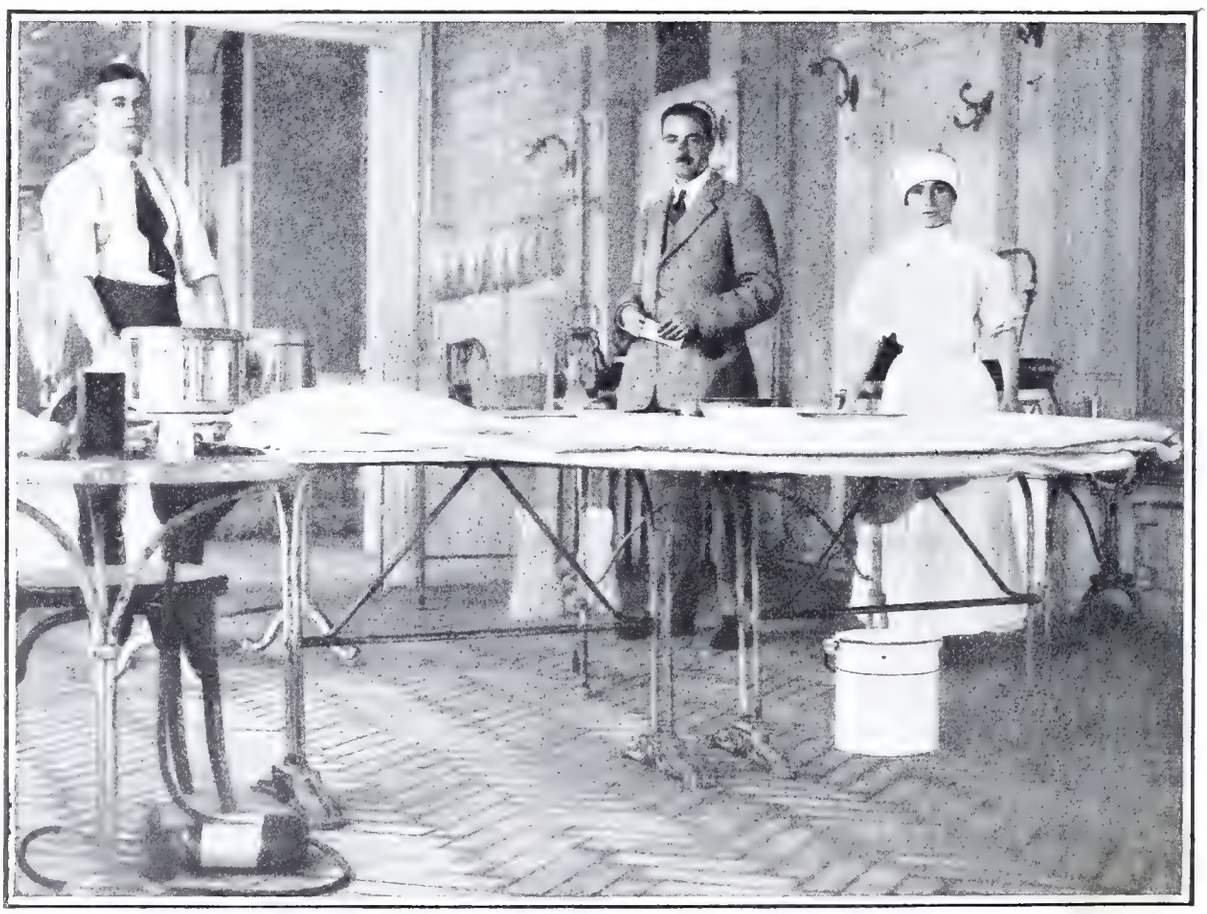
The second battle of Ypres will serve of itself as an illustration of all that it is important to understand. The battle began on Thursday, April 22, and lasted, roughly, for about five days, and in that time a very severe strain was placed upon the whole Royal Army Medical

SURGEON-GENERAL T. P. WOODHOUSE,
Director of Medical Service British Expeditionary Force.

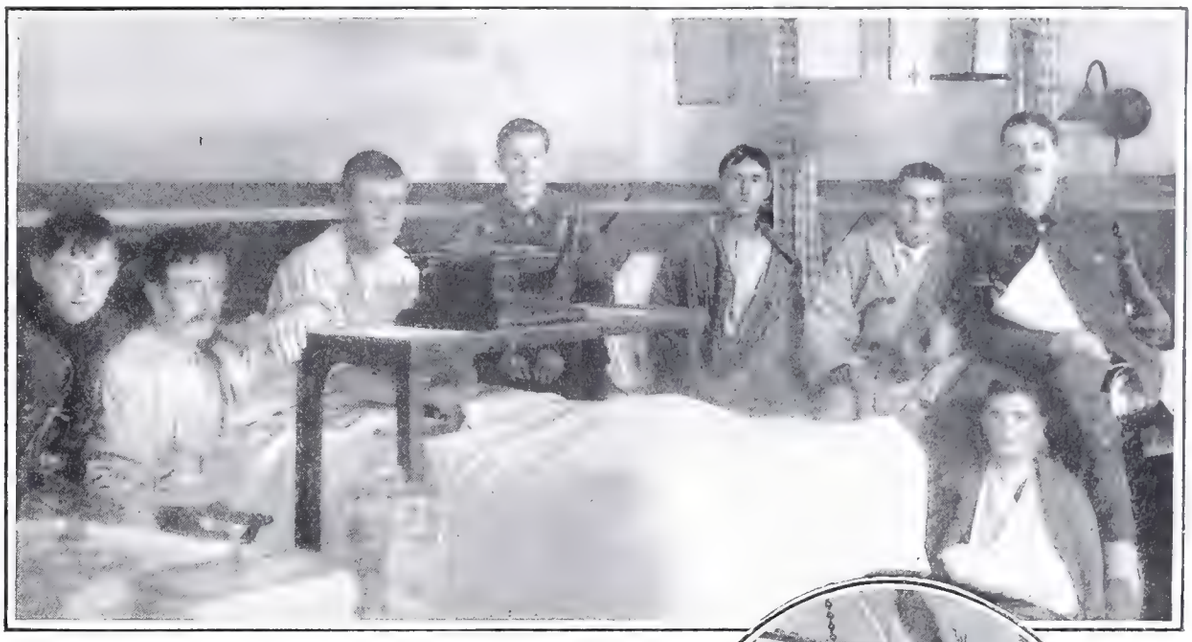
Service. As in the case of the first battle, wounded poured down to the base in a sudden stream, and unlike the first battle this one showed also a percentage of cases suffering from the effects of asphyxiating gas. These cases were of a very severe character.

The organization stood the strain placed upon it in the most remarkable manner. There was not the slightest hitch. Orders for stretchers and blankets for the front and orders for beds were met in the same calm and speedy manner. Delay did not occur. A rush lasting five days was dealt with in five days. There was no overcrowding, no excitement, no unnecessary or avoidable suffering. Backwards and forwards between France and England plied the swift hospital ships; to and from the Front rolled the splendid trains (the number of these providentially augmented by a generous gift of two new ones from the British Flour Millers' Association); the ambulances moved in an unending procession from the station to the hospitals. As the trains came down they were revictualled and re-equipped from the store maintained for that purpose; the work was carried out day and night with the utmost speed, so that as soon as possible the trains might return to the Front.

This work in connexion with the trains and steamers was regulated and controlled from a little office in the Boulogne Central Station. The office was a railway truck improvised for the purpose, and the movements of the trains were worked out upon a small blackboard bearing the three headings: Here, At the Front,



DUCHESS OF SUTHERLAND'S HOSPITAL AT ST. MALO.
The Operating Theatre.



WOUNDED AT THE LONDON HOSPITAL.
A gramophone concert. Centre picture: A sergeant of the R.F.A. recuperating. Bottom picture: Reading war news.

At Other Bases. Trains which could not be dealt with in Boulogne were sent on to Rouen, Havre, Versailles, Le Tréport, Etretat, or Etaples, at all of which places British General Hospitals were in operation.

This work was under the control of Colonel Gallie, to whom its efficient character was largely due, and who deserved the greatest credit for his energy and forethought and also for the spirit of enthusiasm which he infused into all those working under his direction. The complete control of the base had by this time passed out of the hands of Colonel Lynden Bell, C.B., to those of Surgeon-General Sawyer, D.D.M.S. (Deputy Director of Medical Services), who displayed the qualities of a fine administrator and earned for himself the thanks and respect of all who came into contact with him.

By this time, too, the terrible scourge of tetanus had been removed. The simple precaution of injecting every wounded man with antitetanic serum brought about a splendid result and rid the war of one of its worst terrors. On the other hand, there had appeared the cases of gas poisoning resulting from the barbarous methods of warfare employed by the enemy. The gas used was of the heavier than air variety and belonged to the chlorine group. The patients were asphyxiated by it and deaths occurred in many cases on the field of battle. The victim became plum-coloured all over his body and developed a violent bronchitic con-

A WARD IN ST. THOMAS'S HOSPITAL.
Some of the Scots Greys

dition. Later, if life was prolonged, the lung condition cleared up, leaving a subtle type of blood-poisoning of the character of the acidosis met with in the late stages of diabetes. Deaths occurred in this stage also, and were attended by fearful suffering.

It would be impossible to close this section of the history of the medical work in France without a reference to the hospitals supplied and staffed by British Colonials. There were several such units, but the most important were the Australian Hospital at Wimereux and the Canadian Hospital at Le Touquet.

The Australian Hospital was opened very shortly after Boulogne became a hospital base. It was equipped entirely by our fellow-countrymen from across the seas and was organized for work in an exceedingly short period of time. Very great ingenuity was shown by the staff in converting means to hand to their uses. The hospital was a gift in a very real sense, because it represented a national sympathy; and its record of work was as honourable as its object. The medical men were all Australians, and they gave their time and skilled services with the cheerfulness which characterized our Colonial fellow-subjects throughout the war.

The Canadian Hospital at Le Touquet was established at a much later period and its opening was followed within a short period by the heroic and memorable stand of the Canadian regiments at Ypres on Thursday, April 22, whereby a very dangerous situation was saved. At the head of this hospital was Colonel Shillington, a very eminent Canadian surgeon, and the hospital itself represented the last word in modern equipment.

Many of the wounded Canadian soldiers were conveyed to it after the battle at Ypres, and they lay side by side with Britons from all other quarters of the Empire. The hospital had thus a peculiar and memorable significance. The work performed by Colonel Shillington and his associates from Canada represented an act of great self-sacrifice on their part; but the service was rendered in a devoted and unselfish spirit which discounted material loss.

The Indian hospitals, of which there were three in and near Boulogne, were under the care of the Indian Medical Service. They were conducted upon the lines generally favoured in other institutions, but they had a special interest on account of their patients. Their presence justified fully the description of Boulogne at this period as "The hospital city of the British Empire."

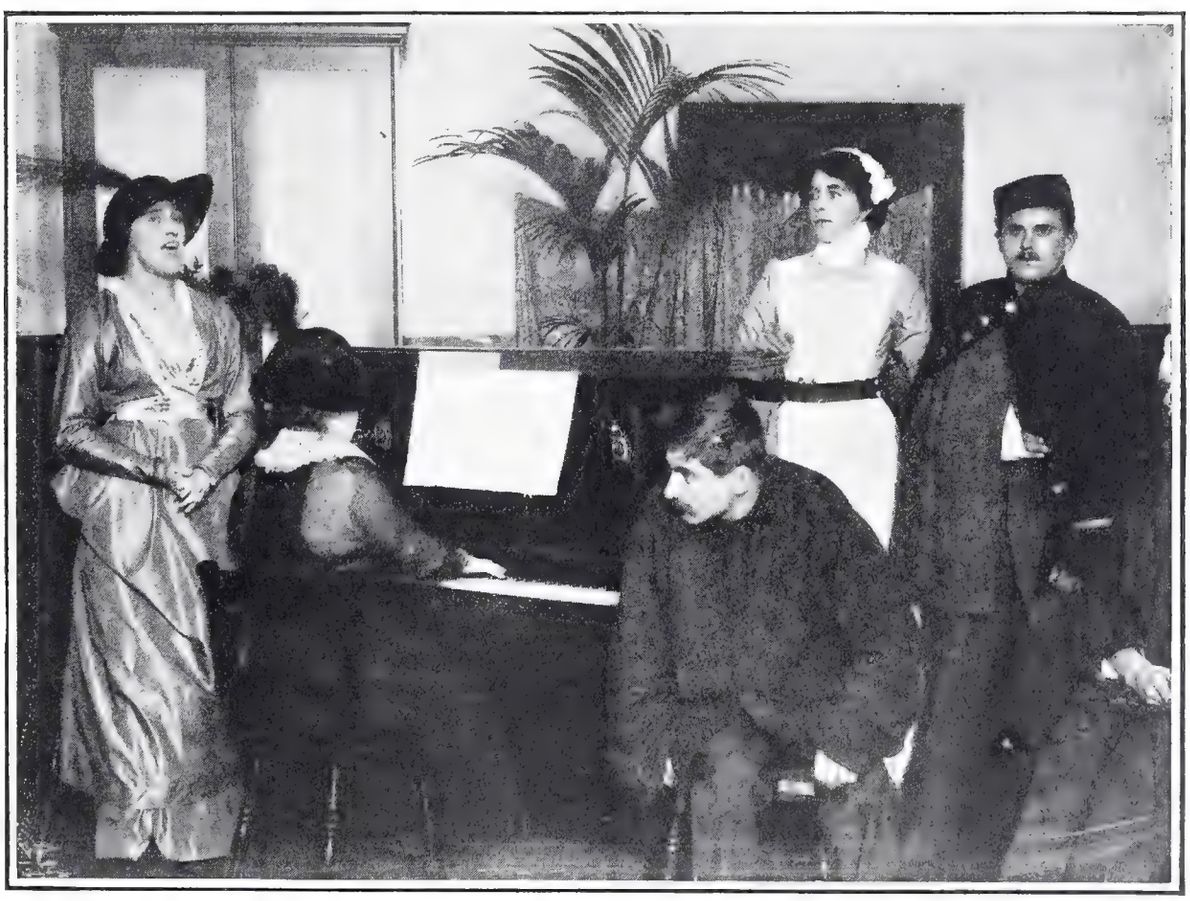
The good health enjoyed by the armies in the Western theatre of conflict was a very remarkable feature of the first nine months of war. This was the more surprising because the number of dead bodies befouling the fields of France and Flanders was enormous; in the inundated area on the Yser alone some 120,000 corpses lay submerged, and the taint produced in the atmosphere was very pronounced at a distance of a mile. Unburied bodies lay for weeks together between the trenches, and the nature of the fighting—"fortress warfare"—rendered the ground exceedingly foul. Nor was there any opportunity of cleansing the ground.

In spite of all these adverse circumstances, the health of the British, French, and Belgian armies remained excellent. Typhoid fever was met with, but not in sufficient measure to warrant the use of the word epidemic as that

word is understood in the parlance of war. A minor outbreak which occurred among Belgian soldiers in Calais in December, 1914, was met promptly by the inoculation of the troops and was thus stamped out. From *The Times* Fund a grant of £10,000 was made towards the expenses of dealing with the outbreak. The money was expended in founding a hut hospital in connexion with the Sophie Berthelot hospital in Calais, under the charge of Major Stedman. A few cases of typhoid fever occurred in the British Army, and some of these were dealt with in huts at Wimereux. The French also had some cases. But in connexion with typhoid fever there can be no doubt that inoculation and good sanitary arrangements, both at the Front and behind it, preserved the health of the troops. The Royal Army Medical Corps acted in a very able manner in this respect, and sent out specialists to take every proper prophylactic measure. Entomologists were also employed to deal with the question of parasites, especially lice, which swarmed in the trenches.

After a short voyage by hospital ship, the wounded from France and Flanders reached England so quickly that the men from Neuve Chapelle—to take one case—were comfortably installed in British hospitals on the following day, 187 British and 581 Indians arriving at Brighton alone on March 16, 1915. The mere distribution of the suffering cargoes among the institutions waiting to receive them called for the highest talent in organization. Fortunately both the Army and Navy Medical Services worked with clockwork efficiency and were so ably backed by the British Red Cross Society and the various voluntary organizations co-ordinated with it for the war that the complicated work went more smoothly and swiftly than might have been thought possible. A mere enumeration of all the hospitals that were made available would occupy too much space, but a few may be mentioned as types of the various classes, and we will describe in some detail the famous establishment at Netley.

The town of Netley is situated on the east side of Southampton Water, three miles from Southampton, and connected by a direct railway journey of thirty minutes with Portsmouth, where the military invalids were



MUSIC IN THE HOSPITAL.
Singing to the wounded patients in Charing Cross Hospital.

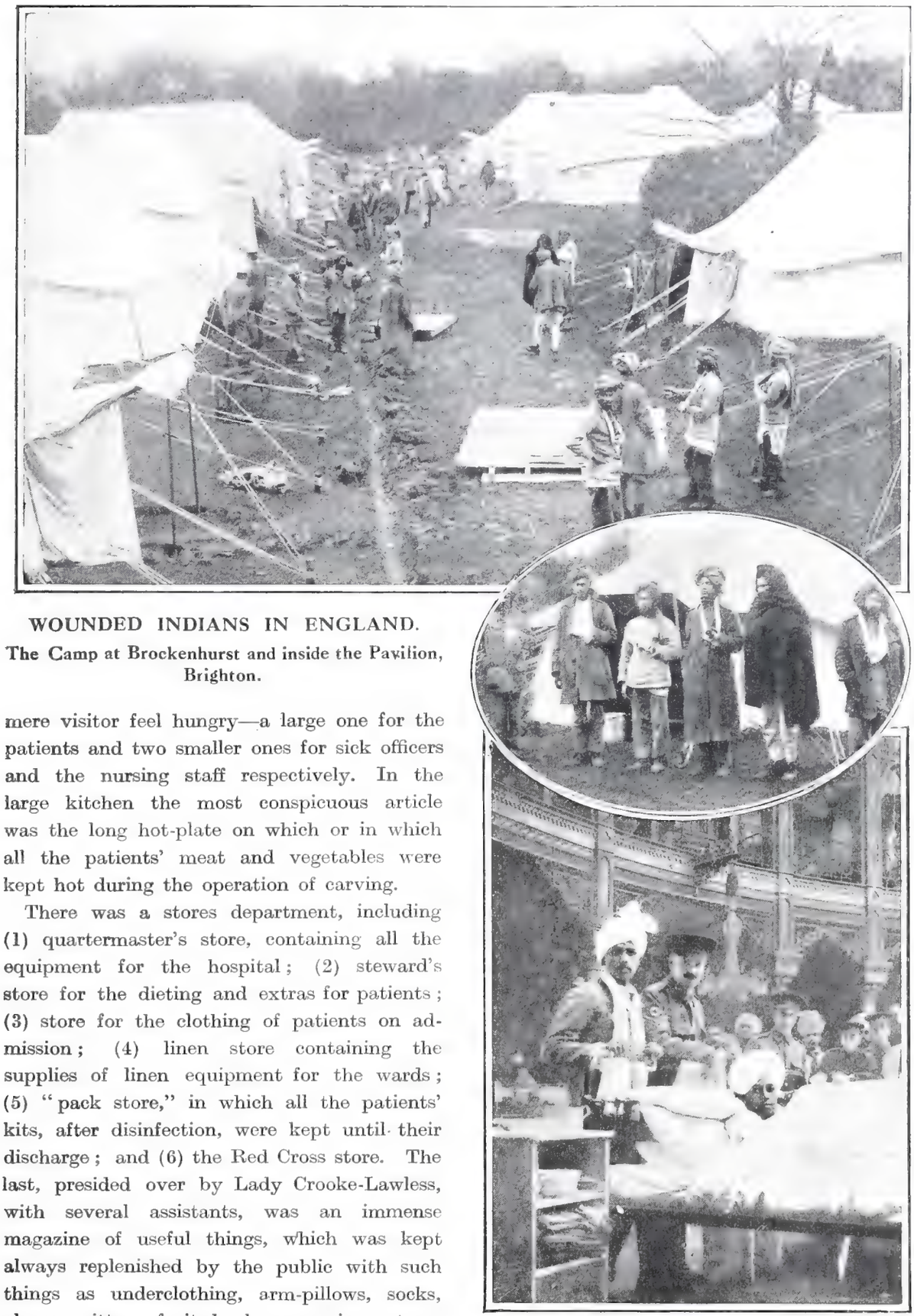
disembarked. The Royal Victoria Hospital was always a superb building, of which the foundation-stone had been laid by Queen Victoria in 1850. Before 1914 it had nominal accommodation for 878 patients; but during the trooping season each year over 1,000 were always taken in. Very soon after the beginning of the war it was foreseen, however, that even this number of beds would be hopelessly inadequate for the demands which would be made upon the hospital, no matter how generous might be the provision of emergency hospitals in other parts of the country or how methodical the system of drafting new arrivals thereto: and one of the ways in which the War Office prepared at once to meet the difficulty was by inviting the British Red Cross Society to build and equip at Netley a base field-hospital of wooden huts to accommodate 500 extra beds. Not only was this task promptly undertaken and splendidly carried out, but also, through the public-spirited generosity of Lord Iveagh, a further addition of huts for 200 beds, making 700 in all, was provided, thus bringing the new adjunct of Netley to dimensions not far short of the Royal Victoria Hospital itself.

Exclusive of the additional accommodation given by Lord Iveagh, the main Red Cross Hospital at Netley consisted of twenty-five huts, each to accommodate twenty patients, in addition to the necessary administrative buildings, kitchens, stores, etc. Each hut was a narrow parallelogram in outline, 60 ft. long and 17½ ft. in width, built of wood with double walls. It had nine windows, which could be opened when weather permitted, with an ingenious hopper window above each, which could be opened in all weathers. In addition there were fanlights over each door and three revolving ventilators in the roof. Thus, that first essential of hospital work, a plentiful supply of pure air, was assured at all times. Each hut was warmed by two large slow-combustion stoves, burning coke, one at each end; and there was an annexe to each, in which cleaning materials, etc., for the ward were kept.

There were three perfectly equipped kitchens, whose spotless cleanliness made the

WOUNDED SOLDIERS AT BLENHEIM PALACE.

Group in the grounds of the Duke of Marlborough's Palace. Inset: Soldiers playing cards in the Long Library.



WOUNDED INDIANS IN ENGLAND.
The Camp at Brockenhurst and inside the Pavilion, Brighton.

mere visitor feel hungry—a large one for the patients and two smaller ones for sick officers and the nursing staff respectively. In the large kitchen the most conspicuous article was the long hot-plate on which or in which all the patients' meat and vegetables were kept hot during the operation of carving.

There was a stores department, including (1) quartermaster's store, containing all the equipment for the hospital; (2) steward's store for the dieting and extras for patients; (3) store for the clothing of patients on admission; (4) linen store containing the supplies of linen equipment for the wards; (5) "pack store," in which all the patients' kits, after disinfection, were kept until their discharge; and (6) the Red Cross store. The last, presided over by Lady Crooke-Lawless, with several assistants, was an immense magazine of useful things, which was kept always replenished by the public with such things as underclothing, arm-pillows, socks, gloves, mittens, fruit, books, magazines, etc.

The sanitary department was, of course, a most important part of the machinery, being under the registrar, to whom the staff, consisting of the labourers, under a sanitary corporal, was directly responsible. To every three wards there was a sanitary annexe, with a constant supply of hot water and a bathroom, while a special system of trench drainage had been carefully thought out for the wards occupied by Indians.

In the quarters for the nursing staff the sisters were accommodated in cubicles, some

WOUNDED AT HOWICK HALL.

Howick Castle, Northumberland, turned into a hospital. A wounded Belgian is showing his wounds and relating his experiences to other wounded and some of the lady helpers at the castle.

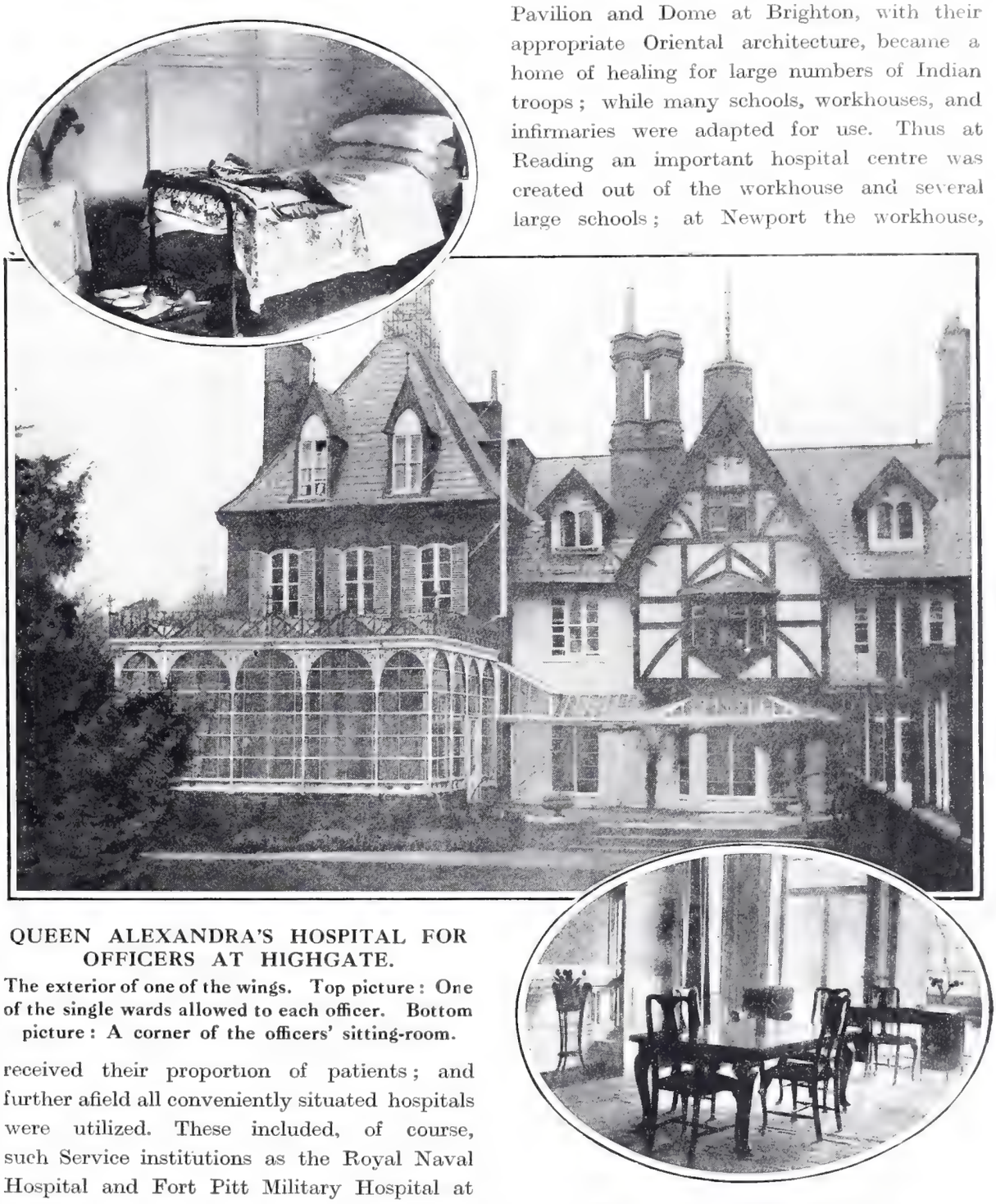
huts having nine of these and others fifteen. The matron had a private sitting-room and with the home nursing sister occupied a separate hut, while ladies from the various Voluntary Aid Detachments occupied cubicles in a special hut of their own. There was also a separate ward with kitchen and bathroom for sick nurses, and four huts for the medical staff, one for the senior surgeon and senior physician, and the three others, each with six cubicles, for the rest of the staff.

In addition there was a large dining-hall for the sisters, and separate bath-houses for the patients, nursing-staff, and officers. There was also a very fine operating theatre, the generous gift of the well-known American actress, Miss Maxine Elliott, which was replete with every modern appliance, and a fully equipped pathological laboratory and a dispensary on the same complete scale. There were, in addition, three fine recreation huts for the patients, nurses, and officers respectively, and a spacious and cheerful dining-hall for those patients who were able to move without assistance. A very efficient fire department and a variety of invalid vehicles and chairs, with materials for all sorts of games, gramophones, etc., completed the equipment.

Externally the camp resembled an orderly town of uniform grey buildings, having a restful appearance behind the pines and evergreens through which it was approached, and within which seats and shelters were sprinkled for patients able to make use of them.

Before the month of the declaration of war had closed there were already 520 war-patients at Netley, of whom 342 were wounded. At the same early date the Herbert Hospital at Woolwich, which ranks with Netley as a general hospital of the Services in peace time, had about 300 wounded. Of the great London hospitals, within a month of the beginning of war the London Hospital had about 300 wounded and received a cheque for £5,000 from a generous supporter in consequence. St. Thomas's Hospital had taken in about 100. A little later King's College Hospital reached the figure of 400, of whom 270 were Territorials. St. Bartholomew's, Charing Cross,

and others also took in war patients according to their capacity. But of all the London hospitals, King George's, established in the new buildings for the Stationery Office, near Waterloo Station, took the lead. Many suburban institutions, such as the Richmond Hospital,



QUEEN ALEXANDRA'S HOSPITAL FOR OFFICERS AT HIGHGATE.

The exterior of one of the wings. Top picture: One of the single wards allowed to each officer. Bottom picture: A corner of the officers' sitting-room.

received their proportion of patients; and further afield all conveniently situated hospitals were utilized. These included, of course, such Service institutions as the Royal Naval Hospital and Fort Pitt Military Hospital at Chatham, and also many provincial hospitals of note, such as the Norfolk and Norwich, which took in wounded soldiers at the rate of 100 every ten or fourteen days from the commencement of the war, and built a large temporary annexe to accommodate sixty of the number.

It was realized very early, however, that by no means could the existing hospitals of the country be stretched to take in all the flow of sick and wounded; and following the example of King George's Hospital, large buildings of many kinds, which were suitably constructed for the purpose had to be utilized. The Pavilion and Dome at Brighton, with their appropriate Oriental architecture, became a home of healing for large numbers of Indian troops; while many schools, workhouses, and infirmaries were adapted for use. Thus at Reading an important hospital centre was created out of the workhouse and several large schools; at Newport the workhouse, which had accommodated 800 inmates, and Fulham workhouse and infirmary, 900, were cleared for wounded warriors. In London alone about fifty workhouses, infirmaries, and asylums were fitted out as hospitals, and at Manchester the Council Schools shared the same distinction. From the Horton Asylum at Epsom 2,000 lunatics were removed to make

IN THE CANADIAN HOSPITAL.

Canadian Highlander telling a story of a battle by the fireside at Sir Arthur Markham's residence, Beachborough Park, Shorncliffe.

room for sick and wounded soldiers; and by March 17, 1915, no fewer than 800 hospitals were in order, staffed very largely by voluntary aid workers, while many more new ones were being formed.

Among this large number many, of course, were set apart for special classes of patients. Thus, by the spring of 1915, there were no fewer than twenty hospitals, including Brighton, earmarked for Indian soldiers. Of these the best-known and most picturesque was the Lady Hardinge Hospital in Brockenhurst Park, maintained by the Indian Soldiers' Fund Sub-Committee of Ladies of the Order of St. John of Jerusalem. Here 300 wounded Indians were collected as early as the end of February, 1915, under the suitable charge of Anglo-Indian surgeons who understood their castes and had the sympathy of old friendship for them.

In addition to the public and municipal buildings taken over as hospitals by the War Office, grand stands on racecourses, light and airy structures admirably adaptable in many cases for hospital work, were borrowed in various places such as Epsom, Ascot, and Cheltenham. In the two latter instances care was sympathetically taken by the racing authorities not to interfere with the accommodation of the wounded during race-meetings; but at Epsom the Grand Stand Association claimed the right to disturb them for the convenience of racegoers. In the end a compromise was arranged; but the incident went some way to strengthen the protest which had been raised against the continuance of horse-racing during the war.

Private individuals were so generous in offering their houses for the use of the wounded that one of the most onerous tasks which fell upon the British Red Cross Society at home consisted in examining and sifting these offers, so that only those might be recommended to the War Office which were suitable in every way. Even after this process there almost remained an embarrassment of riches; and there was hardly a class of society unrepresented among the generous benefactors. To take a few instances: Queen Maud of Norway offered the entire range of outbuildings at her British home of Appleton, in Norfolk; the offer of Highbury, the late Mr. Joseph Chamberlain's famous home, was accepted; so was the Duke of Marlborough's offer of the splendid library buildings at Blenheim Palace, where amid delightful and magnificent surroundings many a grateful soldier found recovery made easy; while the number of well-known private country mansions, such as Piccard's Rough, near Guildford, offered by their owners and accepted by the War Office, was immense.

Often, of course, these private offers were made for special purposes. Thus Major Waldorf Astor's famous place at Cliveden on the Thames became the site of the Duke of Connaught's Canadian Red Cross Hospital. Here there were 100 wounded Canadians by the end of March.

GOLF FOR THE CONVALESCENT.

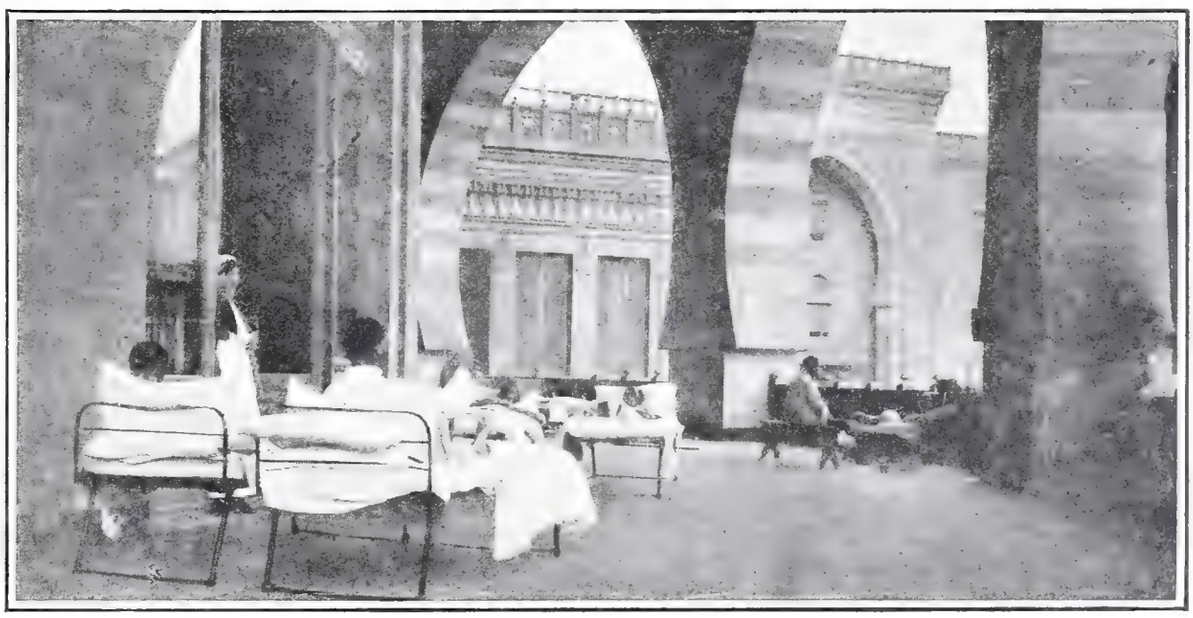
Wounded soldiers on St. George's Hill Golf Course.

1915, and the number was increased to 500 later. The medical staff was entirely Canadian; and by the generosity of the donors of the site and the Canadian Red Cross the hospital was made in every detail as perfect as a military hospital could be.

Many minor hospitals were, of course, set apart for wounded and sick officers. Prominent among these were King Edward VII.'s Hospital for officers in Belgrave Square, London, and Queen Alexandra's Hospital for Officers at Highgate. Here, under the personal supervision of its Queen-Patron, all the best results of war experience were embodied and no detail of comfort was overlooked.

A typical instance of the way in which the sudden need for more doctors immediately affected the whole military machine was seen in the shortage of officers of the Royal Army Medical Corps for the medical examination of recruits. It was easy for the public to think that the duty of examining recruits might be carried out by any civil doctors, in the same way that they examine candidates for insurance, etc.; but the homogeneity and uniformity of a fighting force are the measures of its strength, and the experienced Army examiner alone is really capable of summing up the qualities of one recruit after another into a single total figure representing in his mind the man's capacity or incapacity for service. On account of this important fact the military authorities strained every nerve at the outset to provide only experienced R.A.M.C. officers for the examination of recruits for the Regular Army, even at the cost of delay, misunderstanding, and some temporary discouragement of recruiting; while the volunteered aid of civil medical men was only used for examining Territorial recruits, though very soon the addition of Territorial battalions to the army at the front destroyed the reason for this discrimination.

Enough has been said to illustrate the great strain which the beginning of the war threw upon the Army Medical Service; and unfortunately it coincided with a corresponding strain upon the civil medical profession. This had partly been caused by recent legislation, into the merits of which there is no need to enter here, but in greater measure by the direct and indirect demands already made by war. It was manifest also that these demands would increase greatly with the progress of the war. Not only would medical attendance be necessary for the ever-multiplying battalions and hospitals, but the losses of the R.A.M.C. on active service must be heavy, yet must be made good at all costs. And the other side of the account revealed an alarming deficit also. So many medical students had enlisted that there was a total falling off of about 1,000 in the number qualifying for degrees, representing a loss of 200 to 300 doctors per annum, about one-quarter of the whole supply. To a very small extent only could this deficiency be made good by the employment of women doctors in certain capacities, but this scarcely affected the difficulty of the position in which the War



AUSTRALIAN WOUNDED IN EGYPT.

Troops wounded in the Gallipoli Peninsula: On the terrace of the Heliopolis Hotel, near Cairo, used as the Australian General Hospital.

COMPLETE TRAVELLING WORKSHOP.
Included in a convoy of motor ambulances which was organised by the British Ambulance Committee and presented to the French Red Cross Society.

Office was placed, being compelled to make heavy and insistent demands upon the civil medical profession at a time when the latter was itself seriously depleted and was threatened with increasing losses in the immediate future.

The British Medical Association, however, met the demands of the War Office in a patriotic spirit, and, after consultation with Sir Alfred Keogh, the indefatigable Director-General of the Army Medical Service, recommended to the profession various ways, such as the uniting of light practices under one doctor and so on, in which the needs of the Army might be met. Those needs had been formulated under five heads: (1) Medical men under forty for service with the troops; (2) men over forty for the hospitals; (3) men who would be able to give part of their time daily to military work; (4) men who could undertake to attend officers' and soldiers' relatives in addition to their ordinary practice; and (5) men who could undertake part of the civil work of neighbouring practitioners engaged in military work. There was an immediate response to this appeal from some centres, such as Aberdeen, and the British Medical Association pressed the matter upon the attention of its members in all localities with good results. Yet after the war had lasted nine months the War Office was still in urgent need of 2,000 more doctors. By lowering the standard of qualification it would have been possible of course to obtain a larger supply, but it was felt to be better to import men from the Dominions and even the United States, because the lowering of the standard would not only have given the service an inferior type, but would also have created a great plethora of doctors after the war.

Equally serious with the shortage of doctors was the need of trained nurses. Thousands were wanted for the new hospitals, and the appeal which the War Office issued only brought in hundreds, because the number actually available was strictly limited. The nursing

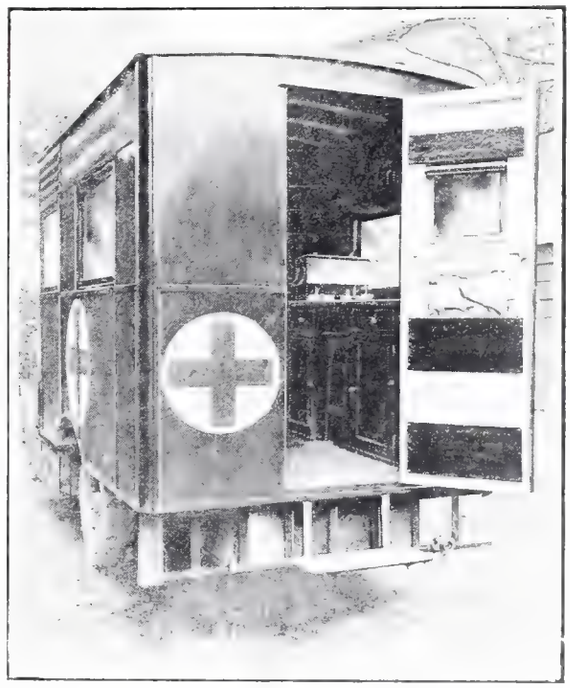
ASSISTING THE ARMY IN FRANCE.
The Queen Alexandra Contingent worked by the Salvation Army.

QUEEN MARY'S HOSPITAL AT QUEENSFERRY.

A group, outside the hospital, including Princess Christian, Sir Arthur May (Medical Director-General), Marchioness of Linlithgow, and Naval officers.

staffs of many public institutions, such as the Edinburgh Royal Infirmary—which received the special thanks of Queen Alexandra for the patriotic spirit displayed—came forward nobly, and contingents came in from the Dominions, about seventy from Australia, thirty from South Africa, and sixty from Canada. But these only went a small way to fill the gap; and the invitation to retired ex-nurses to return to the service did not satisfactorily meet the case, because they were not very numerous and their training was not up to date, nor could instructors easily be spared from more urgent duties for the purpose of teaching them.

In these circumstances the War Office was reluctantly compelled to abandon the tradition that wounded and sick soldiers could only be attended by fully trained and certificated nurses; but, in view of the fact that civilians in hospitals had never had such special nursing, it must not therefore be supposed that the wounded warriors from France and Flanders were entrusted to unskilled hands. In all voluntary hospitals the system had always been for untrained probationers to work under trained nurses; and this country was fortunate in having had for many years large numbers of zealous women under the Red Cross and other kindred associations, or more especially in the



LABORATORY ON WHEELS.

Princess Christian's bacteriological laboratory, which is fully equipped with the latest appliances.

A RED CROSS TRAIN.

An ambulance train constructed by the Great Eastern Railway Company. It was the gift of the United Kingdom Flour Millers' Association and consists of eight coaches, including five for wounded soldiers, two for kitchens, and one for the medical and nursing staff.

Voluntary Aid Detachments all over the country, working quietly and earnestly to fit themselves for the work of nursing the sick and wounded. Their opportunity had now come and a good response was made to the invitation of the War Office that they should come forward to work under military discipline, in spite of the natural repugnance with which many of them and their friends and parents regarded some of the conditions. It was one thing for them to sacrifice their leisure for the purpose of training themselves for a good work in the vicinity of their homes, but a different matter to leave their homes for the whole period of the war and become inmates of a distant hospital under military discipline.

The difficulty of the whole problem was greatly diminished by a simple reform of procedure, all cases of wounds or sickness being classified as "serious" or "slight" by the inspecting officers at the port of arrival and dispatched to different hospitals, only the serious cases going to institutions which had staffs of trained nurses, the slight cases being looked after in hospitals staffed by ex-nurses, probationers, and V.A.D. members.

In this way adequate arrangements were made for the reception of the constantly increasing flow of sick and wounded from the Continent to England, and it was satisfactory to all concerned to know that warm gratitude for the kind and skilful treatment received was the unvarying feeling expressed by officers and men on leaving the hospital to which they had been consigned.

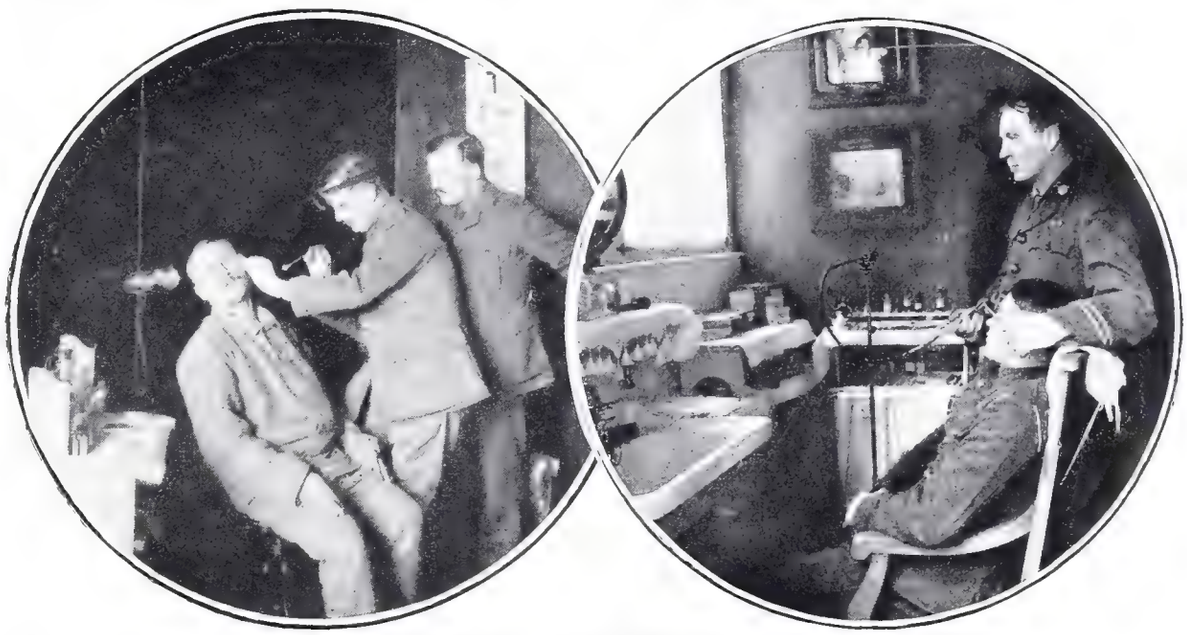
A minor but sufficiently serious difficulty which made itself felt at once in hospital work, and threatened to increase unless measures could be taken to deal with it, was the scarcity of many important drugs, chiefly because before the war Britain had been accustomed to rely upon German manufacturers for them. The well-known German drug aspirin was especially scarce, and though medical substitutes for carbolic acid itself were easily obtained, this was not at first the case with aspirin. Another German drug, thymol, was also very scarce, and so was lanolin, which was made from the purified fat of sheep's wool, and so was Ehrlich's great drug, Salvarsan or "606." Many other drugs—not all made in Germany, as, for instance, atropine—were also dear and scarce on account of the war. But the crisis and the opportunity aroused the spirit of British enterprise and research, and much leeway in drug production was quickly made up. St. Andrews University and other agencies were quickly at work making the synthetic chemicals which had before been exclusively German, and an enterprising London firm, soon followed by others, were able to supply the War Office with the much-needed salicylate of soda. With plenty of bromides from America and ergot from Russia, and British laboratories all over the country daily recording new successes, the Pharmaceutical Society was soon able to announce that if the Government would allow alcohol to be used for this purpose duty-free the spectre of German competition in the British drug market might be finally laid.

Besides the provision of adequate hospital accommodation, with a full personnel of doctors, nurses, etc., and a sufficient supply of drugs and other materials, one of the greatest difficulties of dealing with the sick and wounded from the front lay in the matter of transport. The means by which they were conveyed from the fighting line to the French coast opposite England has been already fully described. In this work the military authorities obtained immense assistance from voluntary agencies in Britain, some of which had sprung into existence in consequence of the war, while others

which had existed previously had enormously extended the scope of their operations. Nor were these solely concerned in attending to British wounded, for the British Ambulance Committee, under the presidency of the Duke of Portland, and with headquarters at Wimborne House, had already by mid-April, 1915, sent out three convoys of 25 cars each, with drivers complete, for the use of French wounded alone, and others followed. This Ambulance Committee was one of the agencies which had come into existence after the outbreak of war. The British Red Cross Society and the Order of St. John were both quick to undertake the important task of raising ambulance fleets, and when their organization became amalgamated for all war purposes and both received the support of *The Times* Fund, they were able to secure the necessary cars in very large numbers.

The Princess Christian hospital train may be mentioned here on account of the palatial contrast which it presented with the mere trucks which had been used for the wounded in the early period of the war, when even the first makeshift train seemed a godsend. Princess Christian had herself conceived the idea and raised all the money for it, and in her thanks to the subscribers she specially mentioned the "splendid gift" of the Canadian Red Cross and another of £10,000 "from one with a grateful heart for mercies received." The train when complete was 700 ft. long and consisted of 14 vehicles replete with every convenience imaginable and specially fitted for smooth running on the French railways. All the lessons learned from the experience of the train sent to the South African War had been fully utilized, and even the famous "khaki train" built by the L. & N.W. and G.E. Railways was easily eclipsed. Indeed, making allowance for limited space, in comparing the Princess Christian train to a first-class hospital of the day, one needed to insist that the hospital must have been *very* first-class to be worthy of it.

But the sea coast of France was the limit of the train's homeward utility, and here the hospital ships came into use. In creating these, of course, the work had all been done by the Government, and in every case the ship was a converted liner, into which the patients on removal from the ambulance train were slung in shallow cots by cranes, which deposited them gently upon the deck. Here the infectious cases were removed to a special ward built right aft, the other sick and the wounded being conveyed to what had been the dining saloon or to the long wards on the lower decks running the length of the ship on both sides. In each ward the double rows of cots were all so hung that the patients should not feel the movement of the ship, and this necessitated ample swinging-room on all sides for each cot, the whole arrangement resulting in an apparent lavishness of space which is rare in hospitals. The operating theatre and other essentials of an up-to-date hospital were all splendidly equipped, and it



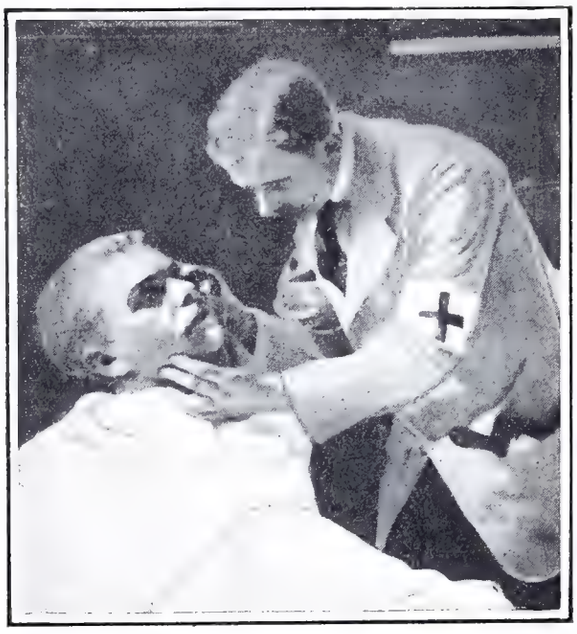
HOTEL AS HOSPITAL.

The Golf Hotel at Le Touquet. Attending to an ear of a German wounded soldier. On the right is seen the dentist attending to a patient.

is safe to say that the short sea journey marked in all but the hopeless cases another milestone on the road to recovery.

On arrival in England disembarcation was carried out by the same strong and gentle machinery which had taken the wounded on board: and here cars, ambulances, and trains were always waiting in readiness to convey the sufferers as swiftly as might be to the hospitals whither after a brief diagnosis of each case they were consigned.

At this point, and more especially at the various destinations to which the trains conveyed their shattered cargoes, the opportunity of the voluntary agencies came again, and it would be impossible to enumerate all those who followed the example of the members of



A WOUNDED BELGIAN.
Examining a wounded soldier's eye at the hospital, Brussels.

the Royal Automobile Club in lending or giving cars for the soldiers' use, and all these, of course, were entirely subsidiary to the great work which was done by the recognized agencies. Taking one instance of the latter, the ambulance column of the London District of the Red Cross alone during the earlier period of the war was using 130 cars and 25 motor ambulances in taking the sick and wounded from the London railway termini to hospital.

About 20,000 cases had been moved by this local Red Cross agency alone before the end of February, 1915, and 400 more cars were asked for in mid-March, and were promptly forthcoming. The remarkable efficiency of this voluntary agency was also shown by the fact that they had 200 fully-trained stretcher-bearers, all volunteers, and that all their drivers, volunteers also, had had five years' training, and were so keen on the work that when an unexpected call came at any hour of the night there was competition among them for the privilege of responding to it. Minor evidence of the splendid Red Cross organization was shown in such facts as that all the blankets used in the cars and ambulances were washed free by laundries, while the pillow cases were gladly washed and ironed without charge by the servants in private houses near the depôt.

By treatment of the wounded in the hospitals several lessons were quickly learned by the medical officers. One, and the most important, was that much too little was known about antiseptics. No system had been worked out, and there were no rules which could be followed at all stages in the long journey from the trenches to the hospital at home by all medical officers into whose hands a patient came, and this lack of uniformity in treatment was the cause of many delays in recovery and some failures.

One consequence of severe wounds which proved very hard to deal with was the "after stiffness," which threatened to become permanent and to deprive the patient of the use of his healed limbs. Fortunately a method of dealing with this ailment, which was more a matter of nerves than of muscles, was discovered in a combination of muscular and mental treatment. This was very successfully practised at the Edgar Allan Poe Institute, at Sheffield, and elsewhere, and, as it belonged rather to the period of convalescence, the treatment could be deferred until the patient had left hospital.

Of other war ailments, properly so-called, the Great War stands rather in history as an example of how disease may be prevented, even where large numbers of men are exposed to unprecedented hardships. The prevalence of "frost-bite" in the feet was, indeed, the direct result of standing for long hours, even days, in the freezing water of the trenches in winter, but the disease was not really frost-bite, which causes gangrene of the tissues. It was rather a condition in which the parts affected had been starved owing to the prolonged chill of the nerves, and unlike true frost-bite it speedily gave way to suitable treatment.

In anticipatory fear of pestilence that might spread to Britain as the result of carnage elsewhere a crusade against flies was vigorously preached in many quarters. Alarm was also

[Stuart.

HER MAJESTY THE QUEEN.

Downey.

HER MAJESTY QUEEN ALEXANDRA.

expressed lest an epidemic of "spotted fever"—cerebro-spinal meningitis—might spread from the crowded military centres, while there were some complaints that men discharged from the Army as tuberculous could not get proper treatment afterwards. The chief cause of this was lack of publication of the existing facilities, although undoubtedly much then remained to be done for the comprehensive treatment of cases of tuberculosis.

In dealing with the provision of hospital accommodation, the supply of nurses, and the transport of the wounded and sick, mention has necessarily been made more than once of the work of the British Red Cross Society. The avowed object of the Society was to ease the strain inevitably put upon the Army Medical Service by the sudden change from peace to war, and as that change gradually involved the increase of the Army to dimensions of which none had even dreamed, it followed that the strain and consequently the effort demanded of the Society to ease it was many times greater than the most far-sighted organizers could have foreseen. Yet the British Red Cross Society—with which the St. John Ambulance Association soon came to a working agreement by means of a joint committee on which also the War Office was represented—rose grandly to the occasion. The movement was essentially a women's movement. By the end of 1914, in addition to the hospital of 700 beds at Netley, described in detail earlier, it had established and staffed private hospitals containing over 17,000 beds and was also taking care of over 25,000 con-

Speaight.

LADY JELLICOE.

Speaight.

H.R.H. THE PRINCE OF WALES.

Stuart.

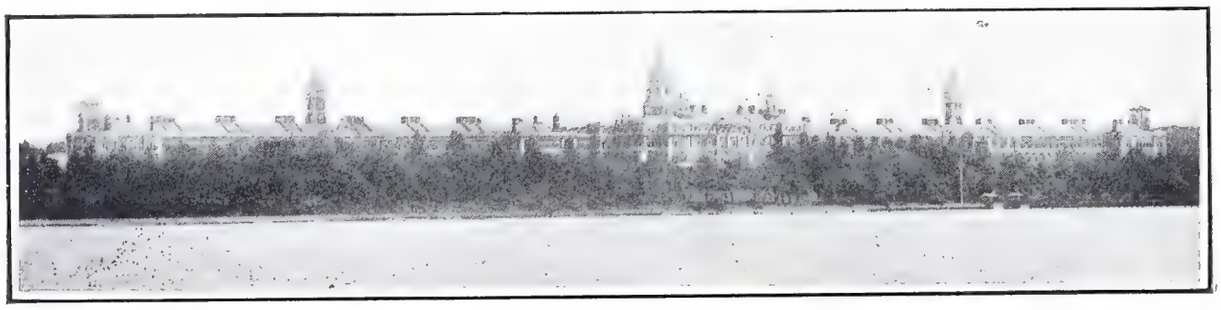
QUEEN AMELIE OF PORTUGAL.

valescents. The work grew from day to day onwards after then, but if the Red Cross could have claimed no more than this first instalment of "easing the strain" its name would have deservedly been wreathed with the gratitude of posterity.

And if the credit given to the Red Cross and kindred associations for the workmanlike methods by which they organized success in a great crisis of the Army's need be the greater because the workers were mainly women, assuredly also in the essentially womanly work of caring for the wounded and the sick their sex gave a certain thoughtful tenderness to many minute details for which one might look vainly in a masculine, especially a military organization. A subtle spirit of sweet gentleness seemed to permeate the strict discipline of the Red Cross work among the wounded and the sick. The men themselves appreciated it, and in many a touching farewell message on leaving hospital they tried to express their special gratitude. And, of course, in the golden opinions won by the Red Cross Society the sister institutions which worked with it, such as the Order of St. John of Jerusalem, the great organization of Voluntary Aid Detachments—originally inaugurated by Miss Haldane in June, 1910, to supply nursing service for the Territorial Army—and others all equally shared, for the grace of charity and the tenderness of womanhood were the mainspring of them all.

To the practical observer neither these virtues, nor even the strictness of the discipline and the difficulty of the work which this host of women willingly underwent, gave more cause for wonder than the ceaseless flow of money from the public that maintained the vast organization in full working order and provided means for the ample equipment of all its undertakings.

Enough has been written to show that in the Great War not only was the Army Medical Service found to be in a state of complete preparedness and efficiency to meet the maximum demand which, according to previous estimates, could be made upon it, but also that when the reality was found to exceed that estimated maximum many times over there was enough patriotic energy to make the huge deficiency entirely good. Never was there a war in which British soldiers suffered so greatly, nor one in which they were so well tended from the very fighting line—after the first shock of war commenced—to the field hospital, the clearing hospital, the hospital train, the base hospital, the hospital ship, the hospital at home, the convalescent home, and at last, to the real "home," whence perhaps after a brief stay they were fit and willing for the Front again.



NETLEY HOSPITAL.

CHAPTER LXVII.

THE SUBMARINE AND ITS WORK.

Influence on Naval Work of Surface Ships—The German Submarine Blockade—The Sinking of the Lusitania—The Evolution of the Submarine Boat—Underwater Boats in Eighteenth-Century Wars—The Development of the Submarine Fleets of Great Britain, Germany, Austria, France, and Italy—Relative Strength of Combatant Flotillas—The Armament of Submarine Boats, Torpedoes and Guns—Repair Ships for Underwater Boats—The Tactical Work of the Submarine as Influenced by Design—Oil or Turbine Machinery—Increased Speed—How a Boat Dives—How the Periscope is Used—Radius of Action of German Boats.

BEFORE the Great War the general public of all countries had learned little of the performances of submarine boats, and less of their design and construction. That such craft were shaped like a cigar, could dive, and be propelled under water while the officer in command was able to view objects on the surface through something called a periscope, and that a torpedo could be fired at any ship or object afloat, was about all that the ordinary reader knew. He occasionally heard of breakdowns, of submarines being run down by surface ships, and even of boats, when diving, digging their noses into the bed of the ocean. It is not wonderful, then, that when war came, involving the nations most earnest in the pursuit of scientific methods, there should be uncertainty and doubt as to the value of under-water craft.

Even among naval tacticians of all nations there was a wide divergence of opinion. Most of them knew something of the mechanism; a few had knowledge of the part played by the new vessels in recent naval manœuvres. Yet there was still wide variance in views as to the value of the ships and as to whether they were best suited for the strategy and tactics to be pursued in war by the great, or by the secondary, Powers. It was soon made clear by the test of war that the submarine boat justified her place among the ships of all nations, great and small, and that the mightiest of the ships of the line must not despise these lurking yet watchful foes.

The acceptance of the evidence as establishing the right of the submarine boat to a place in every fleet must not be stretched to mean that this type of vessel at once did all that was predicted for it. The chief successes of our enemies' submarines during the earlier phases at any rate of the war were against unarmed merchant vessels; but these were generally achieved by violation of accepted rules of warfare. It remains to be seen to what extent laws and customs affecting non-belligerent ships, which carry no contraband of war, are to be abrogated, or how they are to be enforced.

As regards the purely military achievements of underwater craft, it was inevitable that they should be measured by the standard set up by Admiral Sir Percy Scott, Bart., as war broke out within two months of the publication in *The Times* of his famous pronouncement that the submarine boat superseded all other craft except light cruisers and aeroplanes. The main

Lafayette.

ADMIRAL SIR PERCY SCOTT, Bart.

points in Sir Percy Scott's argument were as follows:

The introduction of the vessels that swim under water has, in my opinion, entirely done away with the utility of the ships that swim on the top of the water.

The submarine causes to disappear three out of five of the functions, defensive and offensive, of a vessel of war—*i.e.*, port bombardment, blockade, and convoy of a landing party, or the prevention of all three—as no man of-war will dare to come even within sight of a coast that is adequately protected by submarines.

The fourth function of a battleship is to attack an enemy's fleet, but there will be no fleet to attack, as it will not be safe for a fleet to put to sea.

The fifth function is to attack enemy's commerce or to prevent attack on our own.

If by submarines we close egress from the North Sea and Mediterranean, it is difficult to see how our commerce can be much interfered with.

Submarines and aeroplanes have entirely revolutionized naval warfare, no fleet can hide itself from the aeroplane eye, and the submarine can deliver a deadly attack even in broad daylight.

Naval officers of the future will therefore live either above the sea or under it. It will be a Navy of youth, for we shall require nothing but boldness and daring.

Not only is the open sea unsafe. . . . With a flotilla of submarines . . . I would undertake to get . . . into any harbour, and sink or materially damage all the ships in that harbour.

What we require is an enormous fleet of submarines, airships and aeroplanes, and a few fast cruisers, provided we can find a place to keep them in safety during war time.

In my opinion, as the motor-vehicle has driven the horse from the road, so has the submarine driven the battleship from the sea.

Let us examine Sir Percy's enunciation of the offensive functions of a vessel of war as practised by the British surface ships to ascertain how these were influenced by the enemies' submarine boats. But observation on these points should be prefaced with the remark that the personal equation in submarine warfare is as important as, if not more so than, in any naval operations.

Elliott & Fry.

CAPT. S. S. HALL, C.B.,
Chief of the Submarine Department at the Admiralty.

The offensive functions of a fleet as stated by Sir Percy are: (1) To bombard an enemy's ports: we had the repeated bombardment of the coast of Flanders in German occupation and of the Dardanelles; (2) to blockade an enemy: we contained the enemies' main fleets in the North and Adriatic Seas, although beset by their submarines; (3) to convoy a landing party: we sent across all the oceans greater convoys than in any previous war in the world's history; (4) to attack the enemy's fleet: that was done whenever the enemies' fleets put to sea, even when they sought to decoy us into the submarine and mine zones; and (5) to attack the enemy's commerce: early in the war we swept all seas clear of the enemies' merchant shipping and prevented the entrance of ships into the enemies' ports. All this was achieved despite the fact that Germany used her submarines to the best of her ability.

Conversely let us consider how the enemies' submarines in the first months of war affected the work of our surface ships, whose safety on the open sea was to be endangered, and even whose retention in harbour was to be hazardous because of submarines.

(1) To attack ships that come to bombard ports: submarines were repeatedly used by Germans during the bombardment of the coast of Flanders, and the most notable, if not the only achievement, was the sinking on October 31, 1914, of the old unprotected cruiser Hermes when acting as a seaplane-carrying ship.

(2) To render blockade impossible: Germany

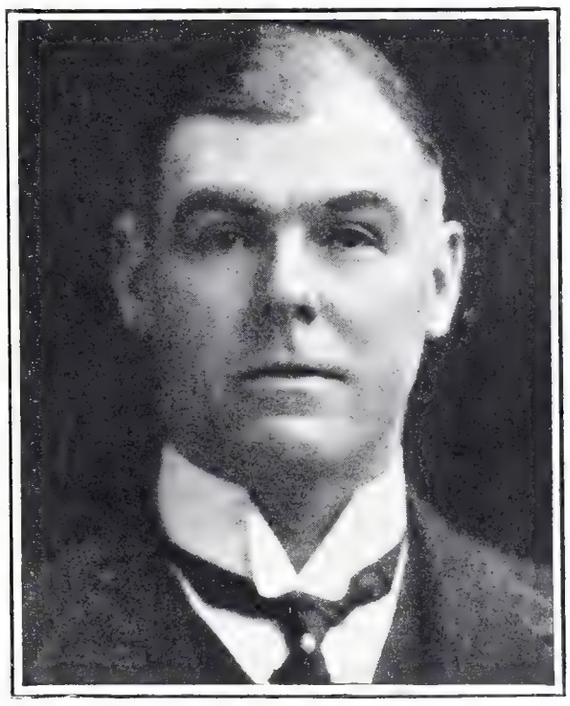
was unable to get direct supplies, and although some of our older ships on patrol were sunk, the limitation of imports to Germany continued effectively.

(3) To attack ships convoying a landing party: no success attended German submarines, although the opportunities were great, as our transports and convoys were unsurpassed in history in their numbers and the length of their voyages. On the other hand, our E14 and E11 did good service against transports and supply ships in the Sea of Marmara.

(4) To attack the enemy's fleet: Sir Percy's view was that there would be no fleet to attack as it would not be safe for a fleet to put to sea. Our Grand Fleet—the greatest ever gathered together—remained on watch and guard in the open sea without molestation, the rare attacks on the fleet by submarines resulting in the destruction of such vessels. It is true that many of our warships were sunk when patrolling separately, and that the Aboukir, Cressy and Hogue were sunk when together; but the great majority, practically all the warships, thus sunk were steaming at low speeds and under circumstances favourable for the German submarines.

The British submarine boats, on the other hand, played a different part, but they have scarcely met Sir Percy's ideal: "With a flotilla of submarines . . . I could undertake to get . . . into any harbour and sink or materially damage all the ships in that harbour." The nearest approach to this was the "scooping" movement which resulted in the battle of the Bight of Heligoland on August 28, 1914. The submarine's part was most interesting. Success was due in the first instance to the information brought to the Admiral by the submarine officer, who showed—to quote the First Lord of the Admiralty—"extraordinary daring and enterprise in penetrating the enemy's waters." In addition to this the submarines behaved splendidly in the action itself and were afterwards instrumental in saving life. According to Commodore Keyes,* in his dispatch of October 17, 1914, E6, E7 and E8 "exposed themselves with the object of inducing the enemy to chase them to the westward." On approaching Heligoland the visibility, which had been very good to seaward, reduced to 5,000 to 6,000 yards, and this prevented the submarines from closing with the enemy's cruisers to within torpedo range, especially owing to the anxieties and responsibilities of the commanding officers of submarines, who handled their vessels with coolness and judgment in an area which was necessarily occupied by friends as well as foes. The Commodore added that "low visibility and calm seas are the most unfavourable conditions

* Commodore Keyes' portrait appears in Vol. II., page 12.



COMMANDER SIR TREVOR DAWSON,
Who 14 years ago predicted use of submarines against British merchantmen.

ENGINEER VICE-ADMIRAL
SIR HENRY J. ORAM, K.C.B.,
Engineer-in-Chief of the Navy.

THE GERMAN "PIRATES" AT WORK.

The "U28" holding up the Dutch Liner "Battavier 5" in the North Sea. The ship was seized and taken as a prize to Zeebrugge.

under which submarines can operate." They did their work satisfactorily as "decoys" and the end was satisfactory, as reviewed in Vol. II., page 8. Our submarine E11 penetrated into Constantinople and torpedoed a troop ship in May, 1915.

And this brings us to the fifth function of the warship as enumerated by Sir Percy Scott—commerce destruction. He did not seem to anticipate that submarines would attack merchant ships. Submarines "in being" were to render impossible the existence on the high seas of warships to attack commerce: that was a weakness in his "thesis" which Lord Sydenham exposed. And yet the idea of a submarine attack on commerce was not new. Commander Sir Trevor Dawson, who has done so much for the development of the British submarine boat as for all our munitions of war, predicted as long ago as 1901 the use of submarine boats against merchant vessels In a lecture to the Institution of Mechanical Engineers in that year he said:

"Attacks would be made on our fleet in much the same way as the bands of Boers are making guerilla attacks on our regular army in the Transvaal. Of the continuous stream of ships passing up and down the English Channel—the busiest steamship track on the globe—quite 90 per cent. are British vessels and upon them our mercantile greatness depends. . . . Submarine boats have sufficient speed and radius of action to place themselves in the trade routes before the darkness gives place to day, and they would be capable of doing almost incalculable destruction against unsuspecting and defenceless victims. The same applies to the Mediterranean and other of our ocean highways within the danger zone of the submarine. The submarine boat has thus increased the value of the mechanical torpedo tenfold."

This is a true picture of what actually happened, although drawn thirteen years before the Great War. From the commencement of hostilities the Germans used their submarine boats with the view of reducing as far as possible the preponderance of our naval force. First contact was on August 9, when one of our cruiser squadrons met with German submarines, and one—U15—was sunk by H.M.S. Birmingham without any damage being done to our ships. But it is not proposed in this chapter to review in chronological order the operations of submarines in the war; it is preferable to take the incidents as illustrations of the efficiency, limitations and probable developments of this type of war craft.

That the Germans were dissatisfied with the extent of their success in reducing our naval superiority in contrast with the increase in the "silent pressure" of our Grand Fleet upon importations into Germany of the necessaries of life and warfare is established, first by the new policy begun in October, 1914, when German submarines were ordered to sink British merchant ships, and second by the declaration of the so-called submarine blockade of Britain from February 28, 1915.

The submarine blockade, characterised by the Prime Minister as a "campaign of piracy and pillage," violated international law in several respects. Ships were sunk irrespective of their nationality or destination or cargo—contraband or otherwise. International law as well as usage ordains that any merchant ship may be searched, her papers examined, and, provided she has no contraband on board, she must be liberated. Otherwise she can be captured and brought into port, and her assumed infringement of law adjudicated upon by a prize court. While Britain and her Allies scrupulously followed this course, German submarines sank at sight, when able, any ship which crossed their way, sometimes without warning. Occasionally the courtesies of war were shown, to the credit of the officers but not of the system. Under the more humane circumstances ten minutes' grace was given to allow passengers and crew to take to the boats. Only in rare cases were neutral vessels allowed to escape, and equally seldom were the lifeboats towed to port or to within rowing distance of land. On the other hand, there were proved cases of shells being fired at men in the boats trying to

[Russell.

LIEUT. W. R. SCHOFIELD
("C29").

Russell.

LIEUT. B. A. BEAL
("B1").

[Russell.

COM. C. P. TALBOT
("E6").

rescue their comrades struggling in the water One of several such cases was associated with the sinking on the Dogger Bank of the trawler St. Lawrence on April 22, 1915.

The German Navy's career of lawlessness culminated on May 7, 1915, in the sinking of the Cunard Liner Lusitania some miles south-west of the Old Head of Kinsale. She was one of the largest and finest of the world's liners—785 feet long and of 32,500 tons gross. She was certainly the fastest of merchant ships, her speed being 26 knots. She left New York an unarmed liner in the ordinary routine of her mail and passenger service, having on board 292 first, 602 second, and 361 third-class passengers, many of them citizens of the United States of America and of other neutral countries, and 651 of a crew—1,906 persons all told, men, women, and children. Warnings by advertisement and communications to individual passengers had been given, in some cases by German officials, that it was the intention of the Germans to waylay the ship by submarines and sink her by torpedoes. The ship sailed as usual, the view entertained being that the realization of the aim would be too great a crime even for the Germans to commit. But the enemy carried out their purpose in all its wickedness, and of the great population on board 1,134 were killed by the explosion or were drowned, notwithstanding every possible effort to save them: the submarine boat was not seen after the disaster.

At the coroner's inquest on some of the victims, Captain Turner of the Aquitania, who was in command of the Lusitania on this voyage, gave evidence which enabled a clear idea to be formed of the sequence of events. On approaching the Irish coast he received, by wireless message from the Admiralty, warning of the presence of German submarines off the Irish coast, and of the sinking of the schooner Earl of Lathom on Thursday, May 6, along with certain instructions, which he said he carried out "to the best of my ability." There were double look-outs keeping special watch for submarines. No submarine was seen. A zig-zag course was not steered. The speed had been reduced to eighteen knots so that the

Russell.

LIEUT. R. K. C. POPE
("C38").

[Russell.

LIEUT. D. M. FELL
("A12").

Russell

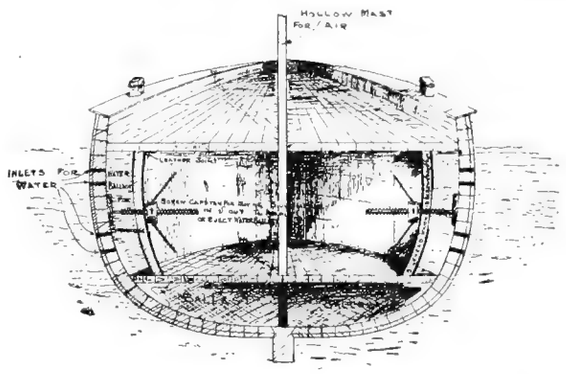
LIEUT-COM. R. R. TURNER
("D3").

vessel would not arrive at the Mersey Bar before the tide permitted her to cross. No warning whatever was given by the submarine. At about a quarter past two, when he was on the port side of the lower bridge, the second officer called from the starboard side of the bridge, "There is a torpedo." Captain Turner ran to the side and saw the wake of it. The torpedo was almost on the surface. When it struck he heard the explosion, and "smoke and steam went up between the third and fourth funnels, and there was a slight shock to the ship." Immediately after the explosion there was another report, but possibly that may have been an indirect explosion. The torpedo probably struck at either No. 3 or 4 boiler-room; it may be that the explosion rent the bulkhead between them, causing havoc to the twelve boilers and the steam-pipes. The second indirect explosion was probably the bursting of the main steam-pipe. The turbines, whether affected or not, were "out of commission"; there was no steam to reverse them, so that the ship had still her momentum up to the time she sank, which, according to the stopping of the captain's watch, was at 2 hours 26¼ minutes, or less than fifteen minutes from the explosion. The way on the ship, and the list to starboard prevented the crew from getting all boats promptly launched; but according to the captain, all was calm and all his orders were carried out. The ship sank under him when he was on the bridge; he was picked up two or three hours afterwards.

The cruel and treacherous procedure of the German submarine warfare on many occasions "gives furiously to think" respecting the predictions of the inhumanity of this system of waging war. Admiral Mahan, at The Hague Conference of 1899, called the submarine boats "inhuman and cruel." When Fulton, an American artist who developed the engineering faculty, about the year 1800 achieved a sufficient measure of practical success with a boat manually propelled under water on the River Seine and in Brest Harbour, the Maritime Prefect of the port refused to allow it to be used in an attack upon English frigates lying off Brest because this manner of making war on the enemy would be visited with such reprobation that the persons who should have waged it and should have failed would be hanged. The French Minister of Marine of the day—Admiral Pleville le Belly—declared that his conscience would not allow him to have recourse to so terrible an invention. "Cold-shouldered" by all, Fulton came to London in 1804, and Pitt, then Prime Minister, appointed a Commission to consider the proposals. The First Lord of the Admiralty—Admiral Earl St. Vincent—recognized the "tremendous possibilities of these inventions, but openly opposed them in emphatic language." He criticised Pitt for his encouragement of this new method of conducting warfare, "which those who commanded the seas did not want, and which, if successful, would deprive them of it."

The Evolution of the Submarine Boat.

The submarine boat is the product of centuries of experiment. Its principles were evolved as the result of trial and error. The early workers established the governing principles, but they failed in attaining reliability because they had not the advantage of those advances in collateral branches of science which so greatly assisted the modern workers. The



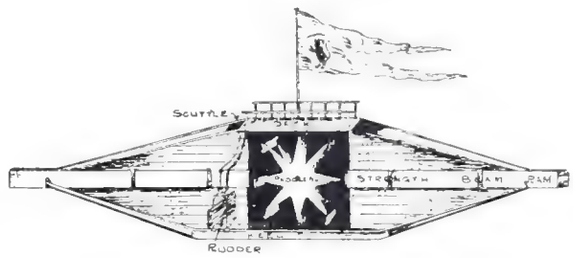
submarine boat was not a practical success until the oil internal combustion engine was perfected, the storage of electricity made practicable within reasonable limits of weight, the Whitehead torpedo improved in power and range, the hydroplane introduced for diving and for keeping the vessel on an even keel under the surface, and lastly, constructional materials evolved to give strength of hull with lightness. And yet underwater craft were used in three wars of the past century—against the British fleet in the American War of Independence in 1812, against the Danish blockading fleet off the German coast in 1850, and against the Federal ships in the American Civil War in 1862–4. In this last alone was there any pronounced success—one ship was sunk and three others injured.

The first known invention of a submarine boat was by William Bourne and was described in a publication of date 1578. As in the modern boat, water ballast was used for ensur-

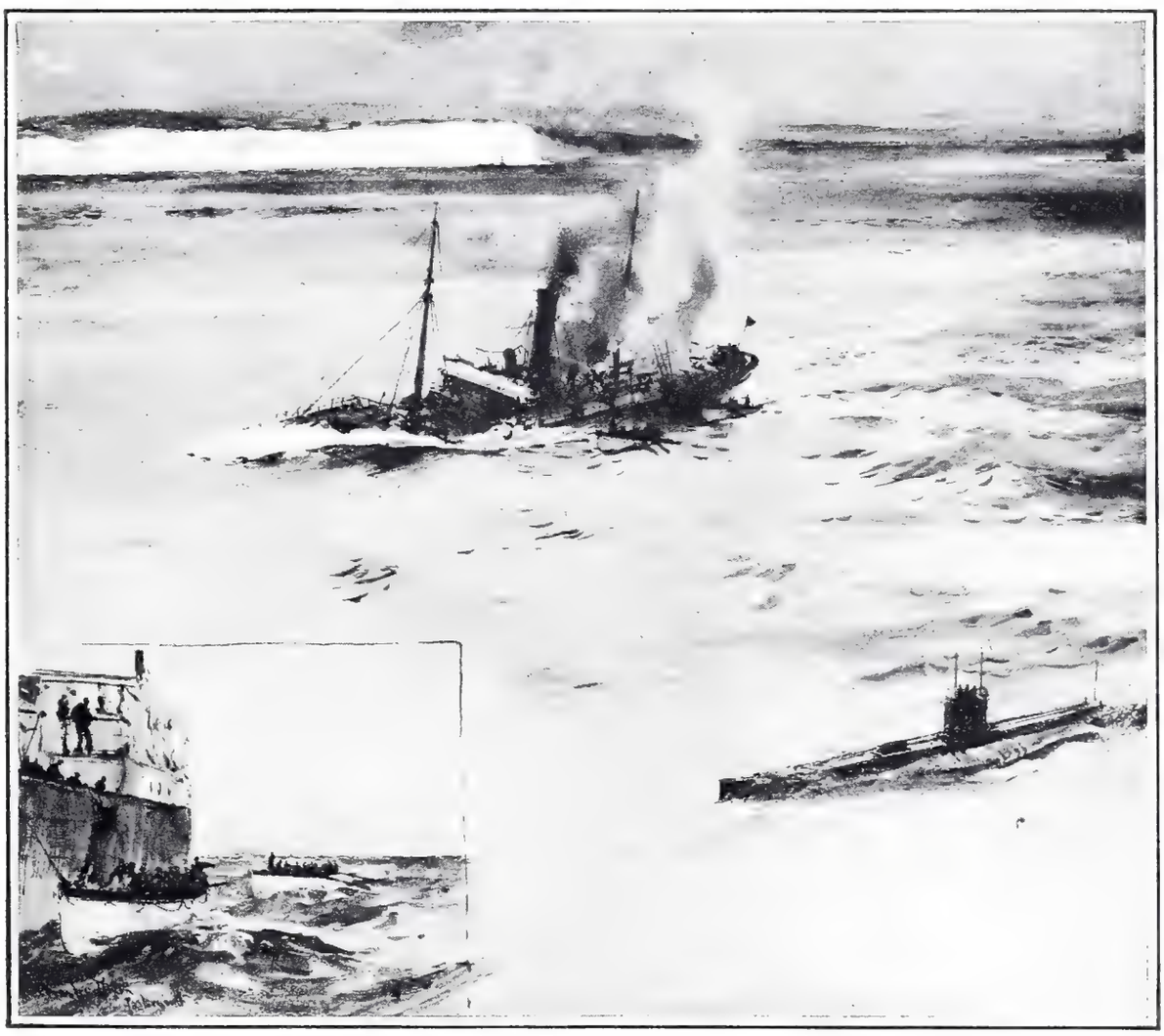
ing immersion. The vessel was practically a covered-in barge, the outer shell was pierced with small holes, and parallel to each side there was an interior division-wall working in leather-lined grooves. This latter was moved towards, or from, the outer shell by screws and a capstan, exactly in the same way as the top part of a letter-copying press is worked against the bottom part. As the inner wall moved from the outer shell, water entered through the small holes, and as the division-wall was forced back, the water was expelled through the apertures. Thus the boat sank or rose. Air supply was admitted through a hollow mast. A sketch to illustrate this boat is given on page 86.

The first known underwater boat actually tried was by a Dutch physician, Cornelius van Drebbele. His boat in 1620 made the voyage just awash from Westminster to Greenwich along with the current. The vessel was weighted down with ballast and propelled by twelve oars projected through holes in the side and kept watertight by leather lining. It was said that he had a "quintessence" for renewing the air.

The first mechanically propelled boat was that of a Frenchman named de Son, which he



built at Rotterdam in 1653. It was 72 feet long and was tapered towards a point at both ends. Centrally placed, internally, but open to the sea at the bottom, was a paddle-wheel, which, driven by clockwork, was to propel the boat from Rotterdam to London in a day.

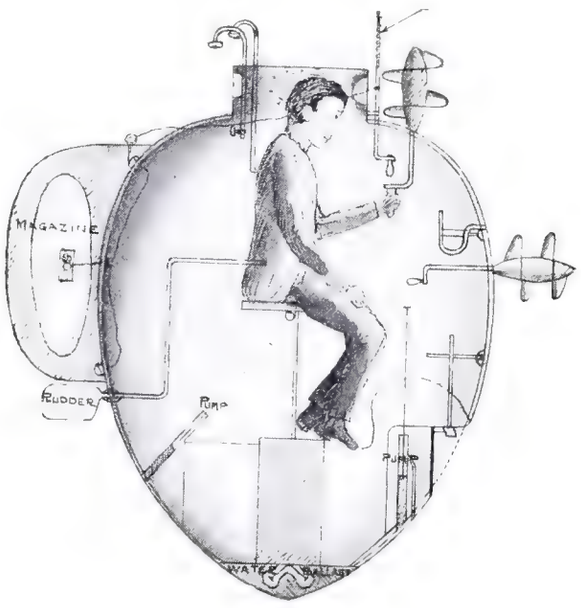


"GERMANY'S POLICY OF PIRACY AND PILLAGE."

The sinking of a British merchant vessel which was torpedoed off Beachy Head by a German submarine, February, 1915. The crew were all saved by the "Osceola."

The wheel is shown in the sketch on page 87, with the side cover removed. Unfortunately, although the wheel worked well in air, it was not powerful enough to move the vessel in the water.

The next interesting test was on the Thames. One Symons covered in an ordinary open, wooden, oar-propelled boat, and fitted it with a number of leather bottles having openings through the bottom of the boat. When the necks were untied water filled the bottles and sank the boat to the "awash" position; to cause the vessel to rise the water was squeezed out of the bottles and the necks retied. This



arrangement has its counterpart in the modern submarine boat; tanks replace bottles, valves are substituted for the tying of the necks, and compressed air drives out the water when the vessel is to rise.

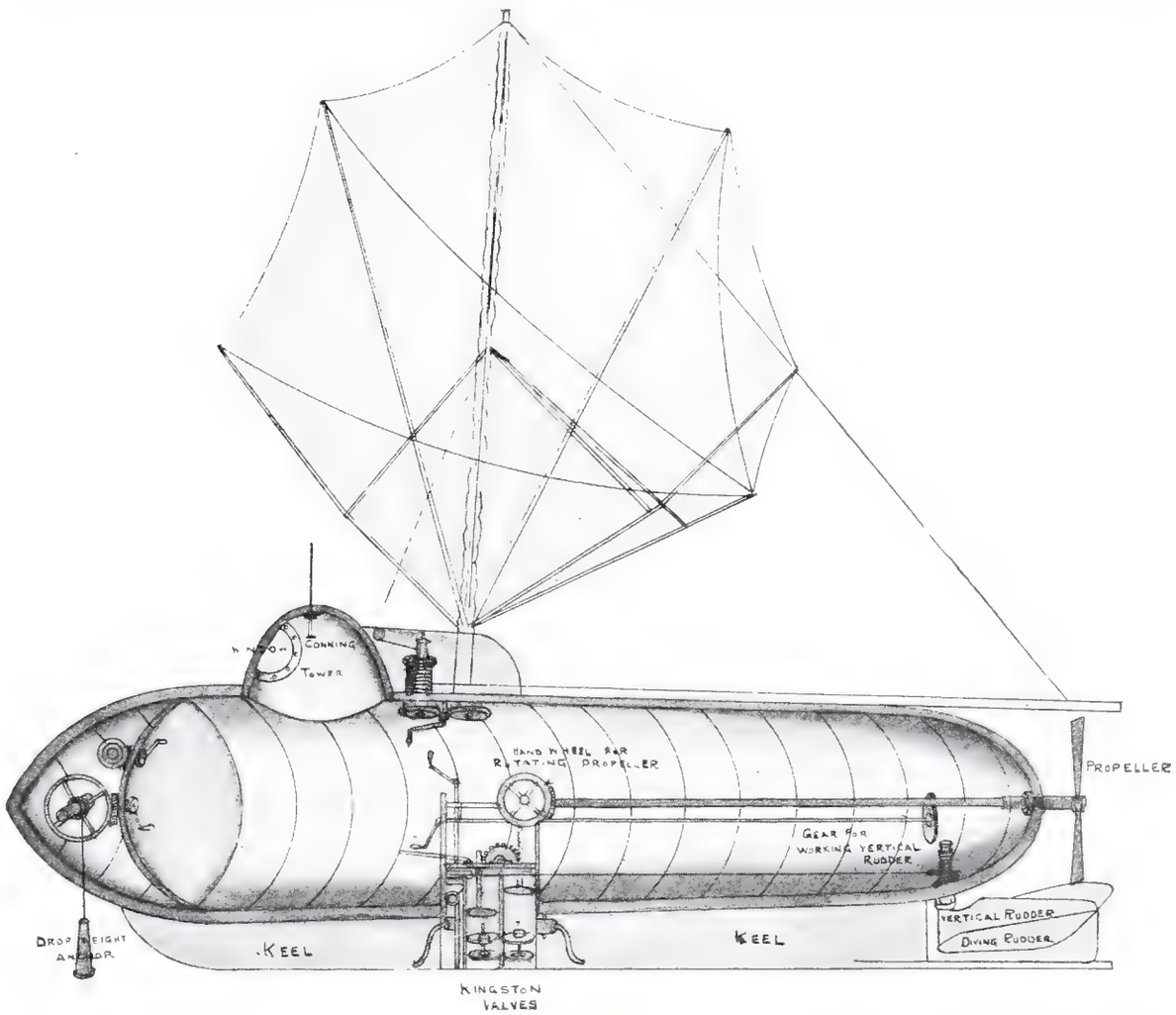
The War of Independence, quickening the ingenuity of the Americans, brought a submarine into action for the first time. It was a most ingenious invention by David Bushnell, who had been educated at Yale College (now University). A sketch through the centre is reproduced above. It was strongly built, egg-shaped in section, with a conning tower in the form of a brass cover like a top hat with a brim, to assist towards stability and to allow a view of the surface when the vessel was awash—two anticipations of later designs. A third was the use of a gunpowder charge to explode under water. For descent there was a water-ballast tank in the bottom, with controlling valves, and for ascent two foot-operated pumps for ejecting the water. For ahead or astern, and vertical or diving, movements there were separate hand-turned screws. With scuttles to admit light, compass, instrument to indicate depth of immersion, and ventilator, the ship was well "found." Again, there was a rudder, the stock of which the operator, while seated, worked with the sway of his body. Indeed, the operator required all his wits to accomplish movements by each hand, each foot, and the sway of his body. The magazine, containing 150 lb. of gunpowder, was saddled to the side and connected to a screw at the side of the conning tower.

When the boat got alongside the vessel to be sunk the operator drove the screw into the bottom of the enemy's ship, released the magazine, which, with the travel of the current, got alongside the ship, and then by clock mechanism operating hammer and percussion cap the explosion was effected. The first attempt was made in a preliminary encounter prior to the war in 1776 against H.M.S. Eagle—a 64-gun frigate—off Plateau Island. All went well until the attempt to drive the screw into the hull, but as the latter was copper-sheathed two tries failed, and the submarine had to return to safety. In the dawn the conning tower exposed the boat, and the occupant unsaddled his magazine in order to increase the speed of escape. The pursuers, fearing disaster from this move, discontinued the pursuit. The magazine exploded. The submarine safely returned. Two further attempts with this submarine failed and Bushnell desisted from further experiment, receiving a commission. In 1812 another attempt was made by a similar boat against H.M.S. Ramillies, but in this case the screw for attaching the explosive to the hull broke. That ended submarine attack during the war.

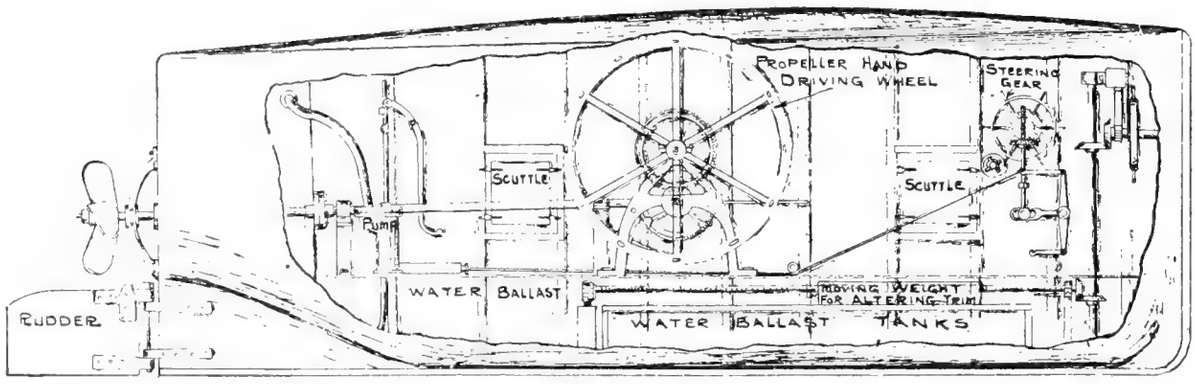
Fulton, to whose work general reference has been made, was a pacifist. He desired to make the existence of navies impossible, and to this end entered upon the invention of explosives. Britain's naval strength encouraged him to look to Napoleon for encouragement, and his submarine boat Nautilus, illustrated on the opposite page, may be said to have marked the beginning of the practicable submarine boat. Launched in 1801, she was first worked on the Seine. She was 21 feet 4 inches long, 7 feet in diameter, designed with a strength to enable her to dive to a depth of 25 feet, being constructed of copper with iron frames. Submergence was achieved by the admission of water into tanks through Kingston valves;

she had pumps for expelling it in order to rise again in the water. Aft she had inclined planes to control the vessel when being submerged or raised. She carried a mast and sails, which were collapsible like an umbrella, so that the mast could be folded down on the deck like those of present-day submarines for Marconi wireless telegraphy and signalling. She had a two-bladed propeller, rotated by a hand-wheel, gearing being interposed to ensure high revolutions for propulsion on the surface or submerged. A vertical rudder served for the steering of the boat. Projecting through a spherical conning tower, with a thick glass scuttle for observation, was a spike for driving into the bottom of the hull of a ship. This spike had a hole in it for the purpose of securing the line to the copper powder-magazine, somewhat after the style of the Bushnell system. There was also a large glass scuttle on the top of the boat to admit light to the interior.

The vessel was easily submerged, and the Seine current enabled her to proceed a considerable distance during eight minutes' submergence. More trials were made at Brest, where she remained below the water for an hour. She covered 500 yards in seven minutes when under water, and returned to the point of starting. As a test an old schooner was blown up by a "magazine" with 20 lbs. of gunpowder towed by the Nautilus. This was the first case of a ship being blown up in Europe by a submarine explosion. Fulton got no encouragement either in France or England, and returned to America in 1806, where he did good service in developing steam navigation.



Germany's first essay was with a boat 26½ ft. long and of 38½ tons displacement, built in 1850 from the designs of a Bavarian artilleryman—Corporal William Bauer—and intended to act secretly against the Danish blockading fleet. This vessel, Le Plongeur Marin, was like the ship-shaped caissons now used at docks, with a hand-worked propeller and rudder at one end. While water was used for immersion, as by Fulton, with the necessary ejection pumps, Bauer had a weight movable fore and aft to alter the inclination or longitudinal trim and thus facilitate diving or emergence. This weight was moved by worm gearing actuated by a hand wheel. On the hatchway, through which the crew entered



and left the boat, there were "gloves" to enable the explosive to be attached to the enemy's ship, and the explosion was effected by a primary battery. A successful feint was made from Kiel, and the moral effect on the Danish warships' crews caused them to withdraw; but structural weakness ultimately caused the water to enter the boat. The air in the interior, being compressed, caused the hatch to blow out, and fortunately Bauer and his two of a crew were shot up to the surface. The sunken vessel was discovered in 1887, and is now, or was until lately, in one of the Berlin museums. Bauer lost prestige in Germany, tried experiments in St. Petersburg, London, and elsewhere, building many boats; he contributed much towards knowledge of submarine boats, but did not achieve final success. He was pensioned by Germany, and has a monument to his perseverance and resource at Munich.

When the American Civil War broke out the Northerners had powerful warships, and against these "Goliaths" the Southern States built submersible boats, which they called "Davids." Some of these were mechanically propelled, having a boiler and a single cylinder horizontal engine driving a propeller through gearing: in others men worked the crank shaft. They were sunk until the top was awash, the funnel only showing, but even this could be telescoped so that little of it could be seen. The 54 ft. long boats, of cylindrical form amidships with conical ends, carried at the bow a spar having a copper case containing 134 lbs. of gunpowder with chemical fuse. This is one of the earliest instances, if not the first, of a spar torpedo. Off Charlestown one of these submarine boats attacked the Ironside, and the quartermaster hailed the unrecognisable object; the reply was a volley of musketry from the submarine hatch, a Federal officer being killed. The submarine kept on its way; its gunpowder exploded, but as it was too near the surface little damage was done to the Ironside. The David was swamped, and the lieutenant and the two members of the crew were picked up by a schooner.

In future boats the spar was given a downward inclination to ensure greater immersion to the "torpedo." Such a boat, with the screw propelled or rotated by eight men working cranks on the screw shaft, succeeded in February, 1864, in sinking in shallow water the new wooden ship Houstanic, the propeller of which, fouling the spar caused the explosion of the charge. The submarine was lost with all hands. This boat had hydroplanes on each side forward to assist in immersion and to keep the bow low. In April of the same year the Minnesota was injured off Newport News by a steam David, and in March the Memphis was attacked in North Elisto River. The measure of "liveliness" due to the Davids kept the Federal fleet on the move, especially at night.

Nearly fifty years elapsed before a submarine boat was again used in war. In the intervening years great changes were made, not only to improve the mobility of the ships and the facility in diving under, and emergence to, the surface, but especially in the weapons of destruction they carried. The noted gun expert, Nordenfelt, took up the proposals and experience of a Liverpool curate, Garrett, who achieved much success with a 14 ft. steam boat. In the next ten years Nordenfelt built several steam vessels—one of 125 ft. in length, of 230 tons displacement submerged, and with steam machinery of 1,300 indicated horse power to give a speed of 14 knots, made a great sensation at the 1887 Jubilee Naval Review at Spithead. From this time forward the British adopted a waiting and watching attitude. France was stimulated by Nordenfelt's success and continued experiments almost unceasingly. Spain worked at the problem for a time from

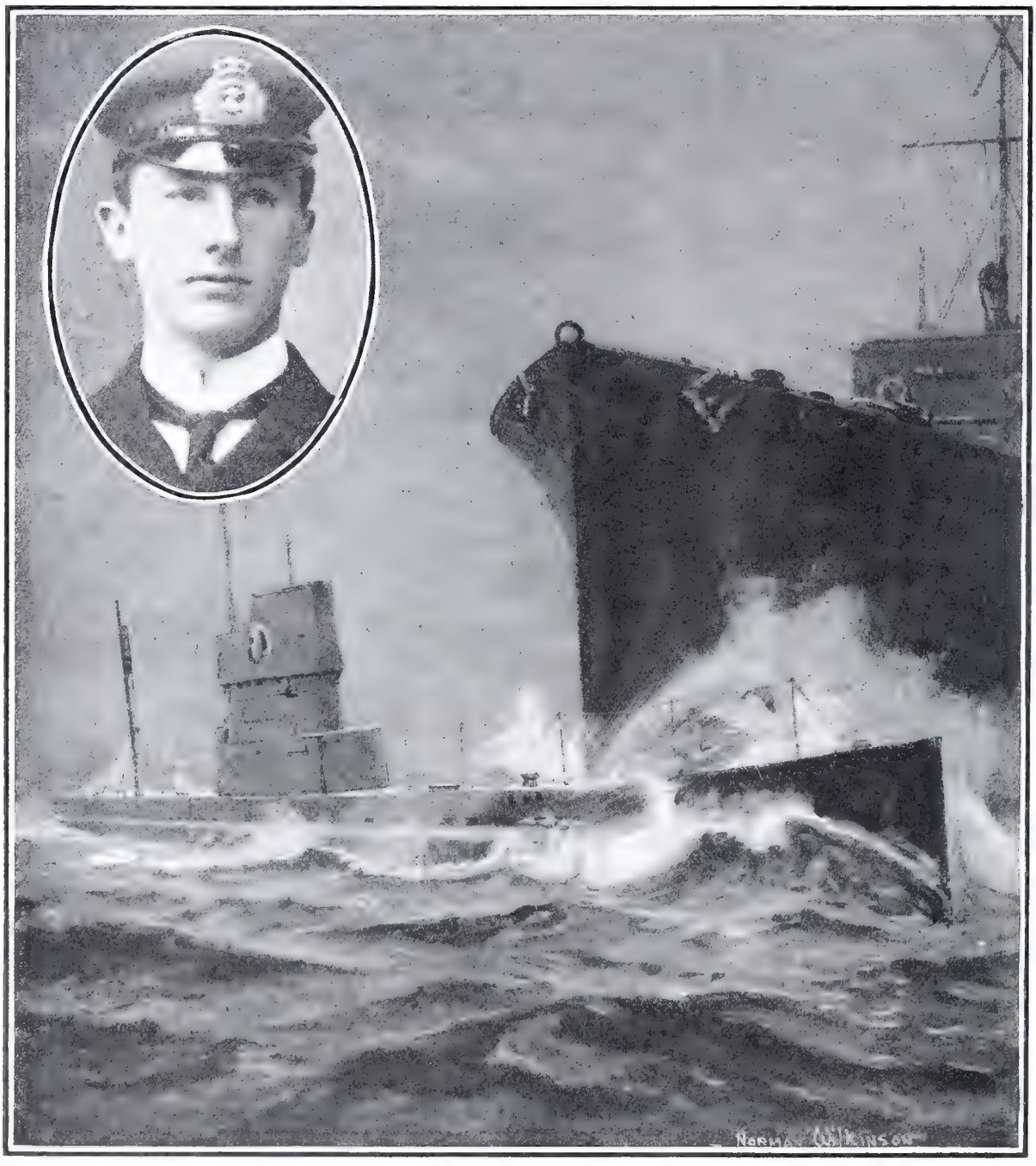
SINKING OF THE GERMAN DESTROYER "S126."

Submarine "E9" (Lieutenant Max K. Horton inset) torpedoes the German destroyer in the mouth of the Ems, October, 1914.

1860, Russia began again in 1876 and America in 1893, but it is not proposed here to review all the stages in the process of evolution; that is completely and admirably done in the book on Submarine Boats, Mines and Torpedoes, by Captain M. F. Sueter, R.N., who himself did much towards perfecting such weapons, and has done even more in bringing aircraft to their present high state of utility.

France was most consistent and confident in adherence to the idea of underwater warfare. Most of the early notable boats were pure submarines and were electrically propelled. Others had steam machinery. Then separate machinery was introduced for surface and for submerged propulsion, steam engines being used on the surface and electric motors under the surface, run by electric storage batteries, the motor being also an electric generator, which, when driven by the steam engine on the surface, recharged the batteries at will. Holland, in the United States, proved the efficiency of gasolene or petrol engines, which took the place of steam engines in later boats.

This use of the oil engine was probably the departure having the most far-reaching effect during the past fifty years. Steam machinery



BRITISH DESTROYER RAMS A GERMAN SUBMARINE.

A German submarine rammed and sunk by the destroyer "Badger" (Commander Charles Fremantle) off the Dutch Coast, October, 1914. Inset: Commander Fremantle.

[Russell.

LIEUT.-COM. R. C. HALAHAN
("D67").

[Russell.

LIEUT. C. H. VARLEY
("A10").

[Russell.

LIEUT. A. POLAND
("C30").

was found in early years not only heavy, but in some cases involved almost insufferable temperatures and increased the time required for diving. The oil engine, when petrol was used, involved danger owing to the possibility of ignition, and when paraffin or petroleum was used in the ordinary system requiring ignition there was still danger and irregularity. The Diesel engine changed all this, and was adopted for submarines first by the French soon after the 1900 Paris Exhibition, where the Diesel oil system was shown at work. The influences of these changes we shall review when we come to consider the tactical work of the submarine as influenced by design.

The British Admiralty ordered their first submarine boat in 1900. After careful consideration of the results of all types they decided to adopt the Holland design of vessel then in use in the U.S. Navy. The American company, which had supported Mr. J. P. Holland, of Paterson, New Jersey, in all his experiments, dating from those with a man-propelled boat in 1875, entered into an agreement with the Vickers company, with Admiralty consent, for the construction of five boats, and from that time, until shortly before the war all British submarines were built at Vickers' works at Barrow-in-Furness, under the direction of Mr. James McKechnie. The result has been most satisfactory, this firm having a great reputation for the ingenuity and enterprise exercised for the improvement of all munitions.

Great developments have been made in British vessels of the class alike in form, offensive power, safety, speed and endurance. Inventions by which these improvements have been effected have been kept secret, and Messrs. Vickers were precluded from building for any unallied navy. An important contributory cause was the great range and variety of experiments carried out by the company, not only in respect of machinery, but in models at their experimental tank at St. Albans. Mr. T. G. Owens Thurston, the naval constructor of the company, has contributed largely to the valuable work by the company for the development not only of the submarine boat and every type of warship, but of means for combating the attack by the newer weapons and craft.

The five boats first built for the British Navy embodied Holland's latest ideas. He had for years adopted the gasolene or petrol engine for propelling the vessel on the surface and for driving an electric motor generator for recharging, when necessary, electric storage batteries which supplied current to the motor

MR. JAMES McKECHNIE,
Director of Vickers Works, where nearly 100 submarines have been built.

generator for propulsion when the boat was submerged. This was the type of machinery fitted in the first British vessels. They were 63 ft. 10 in. long over all, 11 ft. 9 in. beam, and of 120 tons displacement submerged, and were constructed to stand the external water pressure due to submergence to a depth of 100 ft. The torpedo firing tube was at the bow, and three torpedoes were carried. The 160 horse-power engines gave a speed of 7·4 knots on the surface, and the 75 horse-power electric motor 5 knots when the boat was submerged. The vessels had a radius of action of about 250 miles and could work for four hours submerged. They dived like a porpoise, not on an even keel, and each vessel had two horizontal rudders to effect this purpose, as well as two vertical rudders for steering the boat. The conning tower was 32 in. in diameter, and there was a deck 31 ft. long. The view of one of these boats on the beach, on page 101, suggests the whale-like form.

The trials and working of the five boats separately, and in manœuvres with surface craft, yielded valuable data for guidance in designs of future craft, the building of which was justified by the success of these pioneers. The next vessels, known as the "A" class, were 100 ft. long and of 200 tons displacement. At this time foreign Governments had serious difficulties with the submergence of such large vessels, and the ready and complete success of the "A" boats was particularly gratifying to all concerned. Although the A1 was sunk when diving under the Berwick Castle on March 18, 1904, owing probably to a mistake in taking "bearings," that was "an act of God" and not due to mechanical deficiencies. The early "A" boats had Wolseley 16-cylinder engines of 400 h.p. for surface propulsion, giving 11 knots speed; while submerged the rate was 6 knots. The particulars of successive boats, so far as published, are tabulated on this page.

Apart altogether from the increase in size, power and speed, improvements were made in successive vessels. In the "D" Class twin engines and propellers were introduced, adding to reliability and speed. Two periscopes were adopted—one for the captain's use for navigation, the other for that of a look-out to sweep the ocean continuously. Electric gear, too, was adopted for operating the rudders. In the "E" boats not only was the number of torpedo tubes increased, but guns were fitted on disappearing mountings. The number of spare torpedoes carried was greater. The radius of action was greatly augmented. It was not until 1911 that Germany introduced guns.

But perhaps the improvement of greatest significance was the introduction of the Vickers' heavy-oil engine. The use of the petrol engine in motor cars has made the public familiar with the element of danger from fire with petrol. An outbreak would be more serious in its consequences in a boat, especially where there are only comparatively narrow openings for egress, as in a submarine boat. The heavy-oil engine enabled fuel oil of a higher flash-point to be used, so that there was less liability to ignition of the supply. Later, when considering the influence of design on tactics, we shall explain the significance of these and other engine developments. The success of the British submarine was, in a great measure, due to engineering, and in this connexion a reference ought to be made to the ingenuity and enterprise which was displayed not only directly in all naval work, but by the stimulation of his staff, by Engineer Vice-Admiral Sir Henry Oram, K.C.B., the Engineer-in-Chief of the Navy. For something like thirty years at the Admiralty, he exercised a powerful influence in the prosecution of the enormous advances made in naval engineering for surface vessels, which disclosed itself not only in the enormous speed realized by large ships and torpedo boat destroyers, but by the remarkable immunity from breakdowns in peace service and during

Particulars of British Submarine Boats.

—	1–5	Early A.	Later A.	B.	C.	D.	E.
Date laid down	1901	1902	1904	1905	1906	1908	1910
Length over all	63 ft. 10 in.	100 ft.	100 ft.	142 ft.	142 ft.	160 ft.	176 ft.
Beam	11 ft. 9 in	11 ft. 9 in.	12 ft. 8 in.	13 ft. 6 in.	13 ft. 6 in.	20 ft. 6 in.	22 ft. 6 in.
Displacement (submerged) ...	120 tons	200 tons	200 tons	313 tons	313 tons	600 tons	800 tons
H.P. for surface navigation ...	160 H.P.	400 H.P.	600 H.P.	600 H.P.	600 H.P.	1200 H.P.	1600 H.P.
Surface speed	7·4 knots	11 knots	11·5 knots	12 knots	12 knots	14 knots	15 knots
Submerged speed	5 knots	6 knots	6 knots	6½ knots	8 knots	9 knots	10 knots

(The particulars are partly from the Navy Estimates; partly from the Navy Annual.)

LIEUT.-COM. E. C. BOYLE
(Submarine "E14").

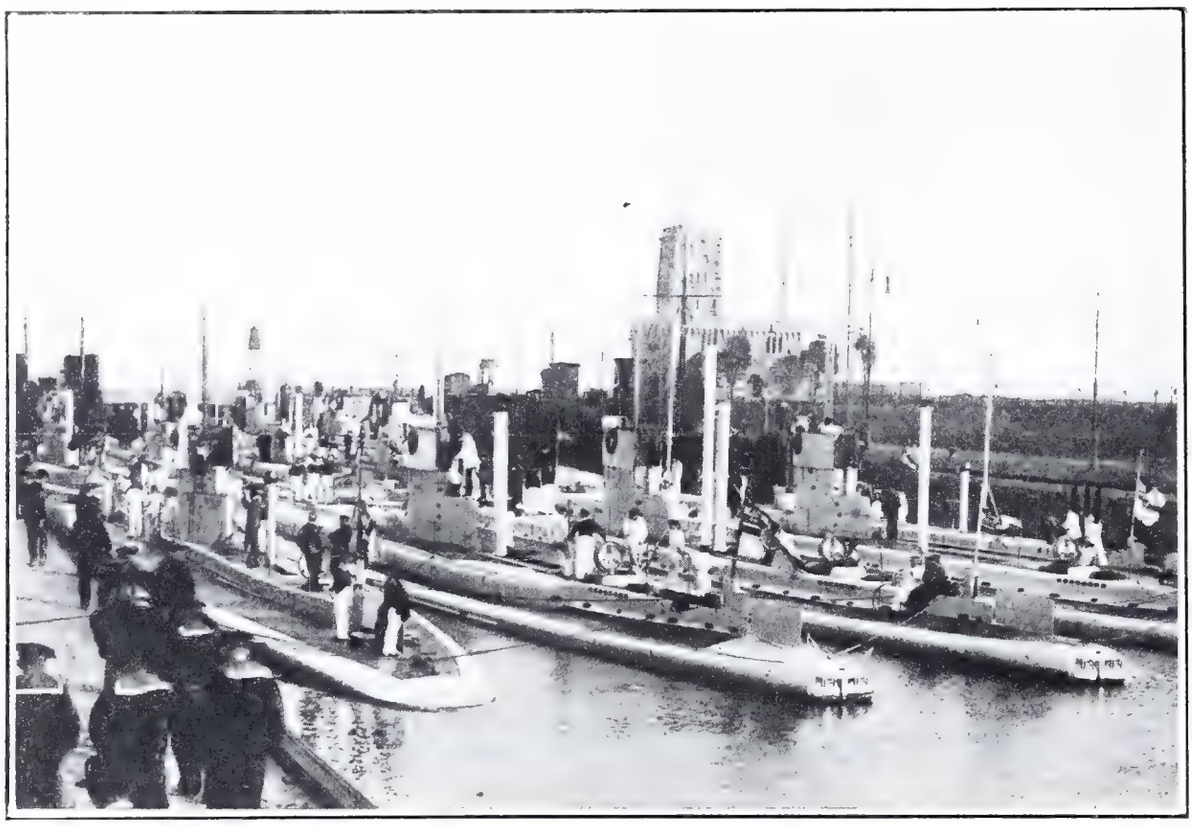
J. P. HOLLAND,
The inventor of the Holland submarine.

the war. Sir Henry was for long Deputy Engineer-in-Chief and became Engineer-in-Chief in 1906.

We may now similarly review the progress of contemporaneous submarine building in Germany. At the time Nordenfelt was working with submarines in England, Germany ordered two boats of the class to be built respectively at Kiel and Dantzig. These, built in 1890, were 114 ft. 4 in. long and of 215 tons displacement on the surface. They had steam machinery. The speed was 11 knots on the surface and 4½ knots submerged. Germany's next boat followed French lines; this craft, 47 ft. long, depended exclusively on electric storage accumulators and a motor for propulsion. The speed was 6 knots on the surface and 4 knots submerged and the radius of action and reliability were low. They next purchased plans from a French officer, whose proposals had been declined by the authorities at Paris. The boat which resulted, built by Krupp at Kiel, was 116 ft. 8 in. long and of 180 tons displacement on the surface. The petrol engine for propulsion was of 200 h.p. and gave a speed of 11 knots on the surface, and the electric motor gave 8 knots submerged. The storage batteries sufficed for three hours' running. Five minutes were required to dive. The two periscopes fitted had each a field of 50 degrees and could be trained in azimuth by electric motors; they had a special erector fitted for

PARTICULARS OF GERMAN SUBMARINE BOATS.

—	"U1"	"U2" to "U8"	"U9" to "U12"	"U13" to "U20"	"U21" to "U32"	"U33" to "U38"
Date of commencement ...	1903	1906–1907	1908	1909-1910	1911-1912	1913
Length	182 ft. 3 in.	141 ft. 8 in.	Slightly larger than the U2 boats	—	213 ft. 3 in.	214 ft.
Breadth	11 ft. 10 in.	12 ft. 4 in.		—	20 ft.	20 ft.
Draught	9 ft. 2 in.	9 ft. 8 in.		—	11 ft. 10 in.	14 ft
Displacement on the surface ...	185 tons	237 tons		450 tons	650 tons	675 tons
Displacement when submerged	240 tons	300 tons		550 tons	800 tons	835 tons
Power of oil-fuel surface engines	400 h.p.	600 h.p.		1,200 h.p.	1,800 h.p.	4,090 h.p.
Power of electric under-water motors	240 h.p.	320 h.p.		600 h.p.	800 h.p.	—
Maximum speed on surface ...	11 knots	12 knots		15 knots	16 knots	18 knots
Maximum speed submerged ...	8 knots	8·5 knots		9 knots	10 knots	10 knots
Radius of action on surface ...	—	1,200 miles at 9 knots		—	1,500 miles at 12 knots	2,000 at full speed, 6,000 10 knots
Radius of action submerged ...	—	50 miles at 9 knots		—	70 miles at 6 knots	95 miles at 4 knots
Armament	One torpedo tube Three 17·7 in. torpedoes	Two tubes Four 17·7 in. torpedoes	Two tubes Four 17·7 in. torpedoes	Two or three tubes Four or six torpedoes, one 1·456 in. gun	Four tubes Eight 19·6 in. torpedoes, two 3·464 in. guns	Four tubes Eight 19·6 in. torpedoes, two 3·464 in. guns



GERMAN SUBMARINES OF THE "U" TYPE AT WILHELMSHAVEN.

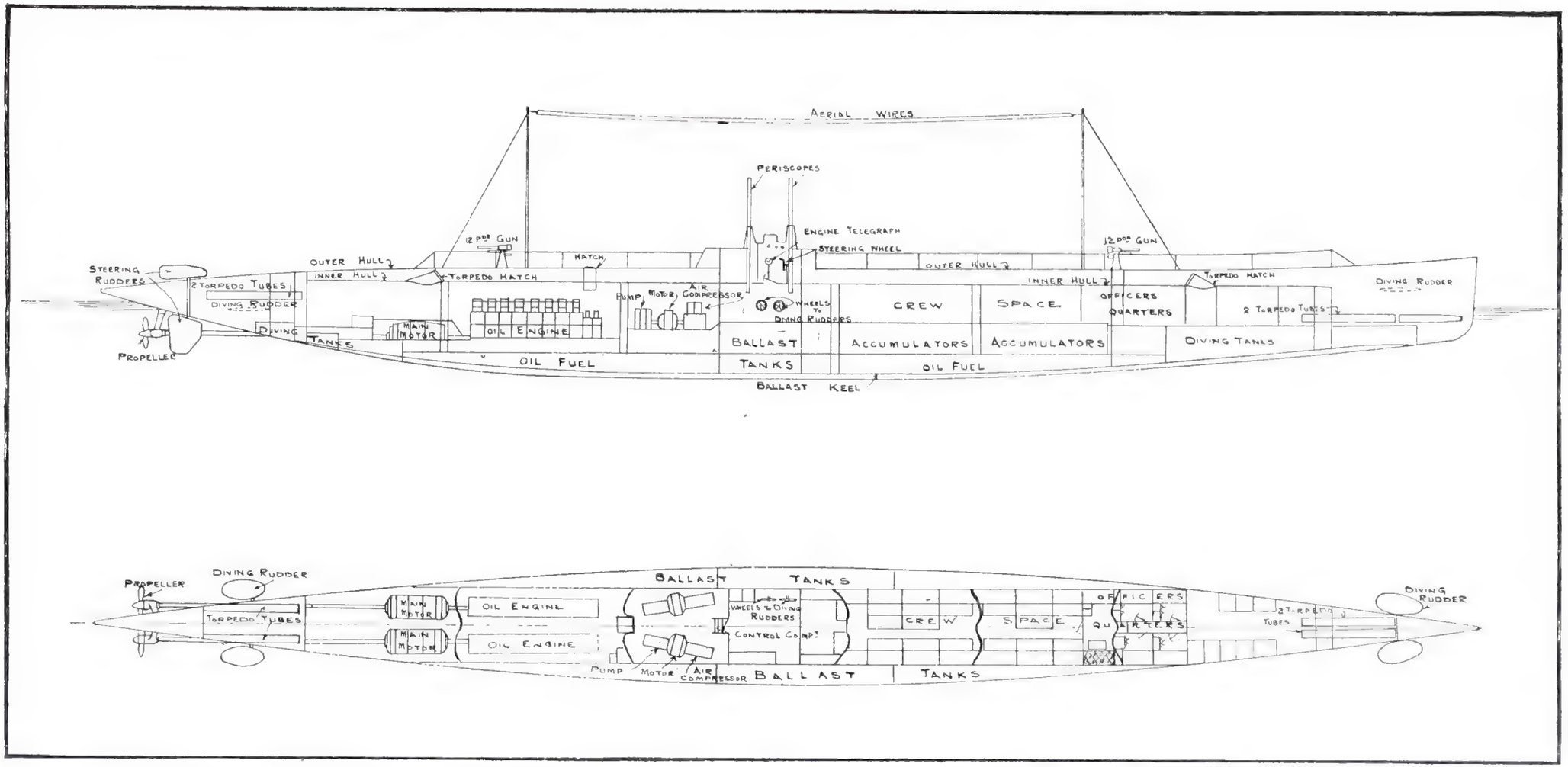
giving the observer an upright image during rotation.

From these beginnings date Germany's submarine policy. Krupp built the first boat in 1906. Like all Germany's boats it was designated by a U, meaning "Unterseebote," and a number—thus, U1. In its characteristics it resembled our "A" boats, Germany being a close student of our naval shipbuilding.

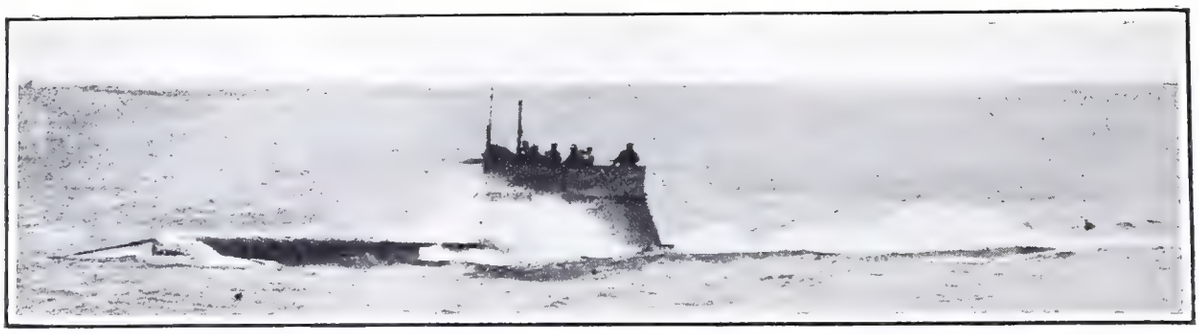
M. Laubeuf, the well-known French designer of submarine boats, at a meeting of the French Society of Civil Engineers on March 26, gave particulars of German submarine boats, and a table comparable with that of the British boats, already given, is reproduced on page 95; the particulars of U33 to U38 are from another equally reliable source.

Germany, entering upon submarine boat building late in the day, profited by the experience of others; boats were ordered from some Continental builders outside Germany in order to find out what was being done elsewhere. But once she had evolved her policy, the "frightfulness" of which has been revealed to all during the war, she pursued her preparations with the same calculated haste as characterized her in all other departments of war-material construction. In the summer of 1907 she had only one submarine in service and seven in course of construction. The sum set apart for submarine construction in the 1907 Budget was £250,000. It increased rapidly, amounting to £350,000 in the Budget for 1908; to £500,000 in that for 1909; to £750,000 in each of those for 1910, 1911 and 1912; to £1,000,000 in that for 1913; and to £950,000 in that for 1914; but there can be no doubt that after the war began an immensely greater sum was devoted to submarine boats.

Sketches of one of the latest German submarine boats are reproduced opposite, one—the upper sketch—shows the arrangement of the interior from the bow to the stern, the other is a plan. In the bow of the boat there are installed two torpedo tubes, so that double torpedo discharge can be effected at an opportune moment. The tanks in the way of these tubes are appropriated for either water ballast or compensating tanks. Strong transverse bulkheads enclose all the forward part of the torpedo tubes and provide an amount of protection in the event of collision. The compartment abaft the collision bulkhead serves for working the torpedoes, loading or adjusting them, and this space is also available for carrying spare torpedoes. The anchor and windlass gear are usually fitted in this room. Below the deck the space is utilized for diving tanks. In the next compartment are the living quarters for officers, comprising cabins, with the usual arrangements of beds, etc., for the comfort of those who may be required to



PLANS OF A GERMAN SUBMARINE.



ON DUTY.

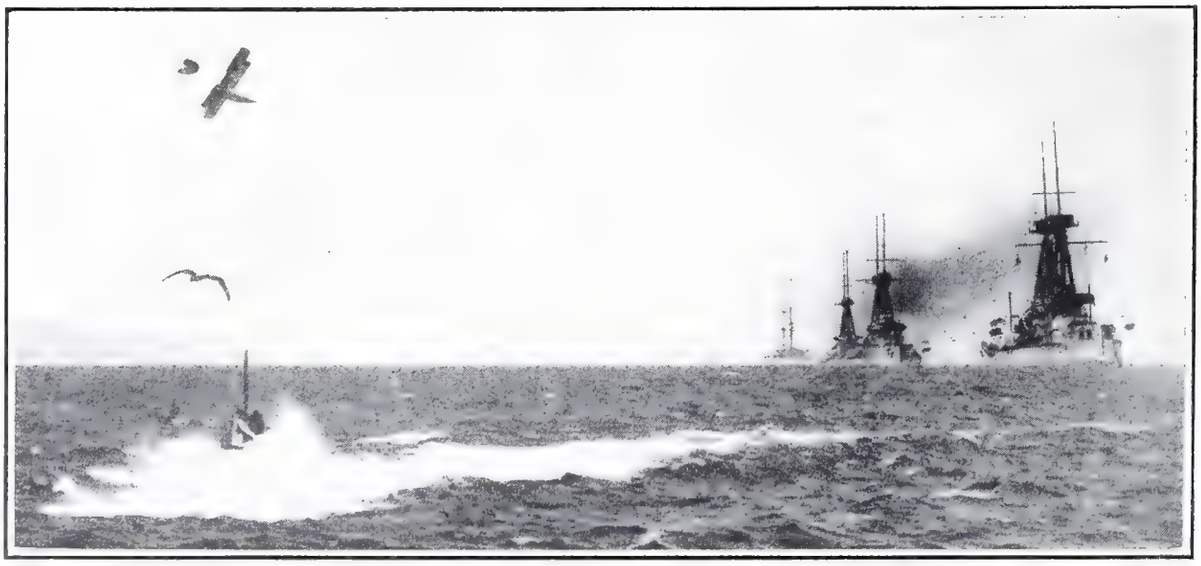
A British submarine, which is cleared of deck hamper, is ready to dive at a moment's notice.

remain at sea for long periods. The next space is allotted to the crew, each member of which is provided with a folding bed, lockers, etc. Below the deck the electric storage accumulators are stowed, and the space below this again is used for oil fuel.

The next division of the boat may be termed the Control Compartment, and in it are placed all the principal elements of control, such as periscopes, conning tower, diving and steering wheel gears, recorders, indicators, communications, etc. The objects projected by the periscopes are observable from inside the boat, so that, when the access hatch to the conning tower is closed down, operations while submerged are carried on from inside the boat proper. Below the deck ballast water tanks are arranged. In this division, too, auxiliary machinery, comprising pumps and compressors with their driving motors, are situated. In the next compartment the main propelling engines of the heavy-oil type are installed. They work twin screws. Oil fuel and lubricating oil are carried in the tanks underneath the engine seating. Immediately abaft the engine room is the main electric motor compartment, in which space are the electric motors for propelling the boat when submerged. At the extreme aft end two torpedo tubes are installed of the same pattern as those at the bow.

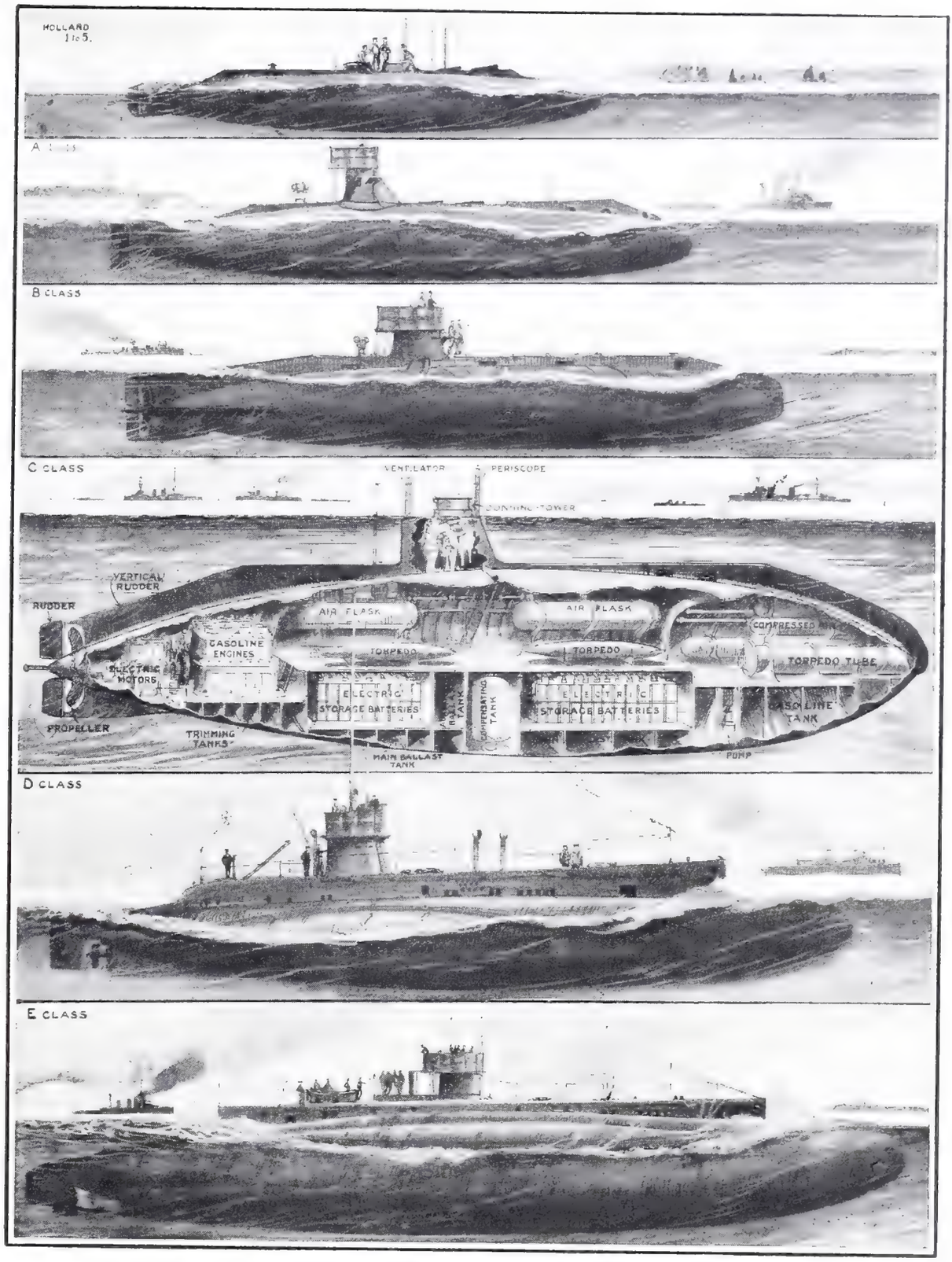
Two 12-pounder guns are placed on the top, having practically an all-round fire. These guns fold down within the superstructure, as will be described later. For diving or submerged running there are control-diving rudders ; those at the bow fold inboard when not required. A vessel of this type may safely submerge to a depth of 150 ft. and come to surface in a few seconds by air-blowing arrangements for expelling the water ballast, or by her pumping gear. The bulk of the water ballast is carried between the inner and outer hulls.

The Austrian submarine boats, few in number and of small dimensions, are for the most part of Krupp origin, and one of these—U5—it will be remembered, sank the old French cruiser Leon Gambetta in full moonlight early in the morning of April 27, 1915, when she was



BY SEA AND AIR.

British warships, submarine and seaplane ; sea gulls on one occasion revealed the presence of a German submarine boat.



PROGRESS OF SUBMARINE CRAFT: HOLLAND TO "E."

patrolling at low speed at the entrance to the Otranto Straits. The sea was calm, but there was great loss of life.

The French contributed more than other belligerents to the solution of submarine propulsion, especially in the early days. They have tried every known system of machinery. In a 420-ton boat, Le Plongeur, built in 1858, with a spar torpedo explosive charge, like that used in the American Davids, they adopted compressed air, which was stored in steel reservoirs, for driving the propelling engines. This boat failed because an even keel, when submerged, could not be maintained. The next notable boat was the Goubet I., only 16½ ft. long and of 11 tons weight; she could thus be lifted upon a warship. She depended solely on electric motors for propulsion and had a speed of 4 to 5 knots

SINKING OF THE "U8" OFF DOVER, MARCH 4, 1915.

The last plunge of the German submarine after being attacked by British destroyers—The rescue of the officers and crew by the boats of the British vessels.

on the surface. She carried two locomotive torpedoes in "collars" on the outside. This boat was purchased by Brazil for £10,000, and a larger vessel of the same class was built for France. The experiments made with her yielded valuable data for guidance in later boats, and Goubet himself, by his experiments, gave a great impetus to other workers. The French authorities continued to encourage scientists, and many types were produced. An invitation in 1896 for competitive designs for a boat not exceeding 200 tons displacement brought designs from twenty-nine persons, one of the most prominent being probably M. Laubeuf, and his vessel, the Narval, marked a great advance. She was 111½ ft. long and of 168 tons displacement submerged. The hull had a double skin, and water freely circulated between the two skins, increasing protection against gun attack. The space, too, was used for water ballast to decrease the buoyancy before submergence and to compensate for the weight lost owing to the consumption of fuel, etc. Laubeuf, adopting Holland's practice, used a different system of machinery for surface and submerged propulsion, but had not the courage of the American designer to use petrol or gasolene engines for the former. Instead the boat had an oil-fired tubular boiler and 250 h.p. triple-expansion engines. A new departure was made in having hydroplanes to increase control in diving, in order that the sulphuric acid would not be spilled from the electric accumulators—which was for long a source of trouble in nearly all boats. Latterly the batteries were entirely closed in. The Morse and the Gustave Zédé were the other competing boats and were electrically propelled. The chief disadvantage of the Laubeuf boat was that, owing to the steam machinery, 20 minutes were occupied in submerging her.

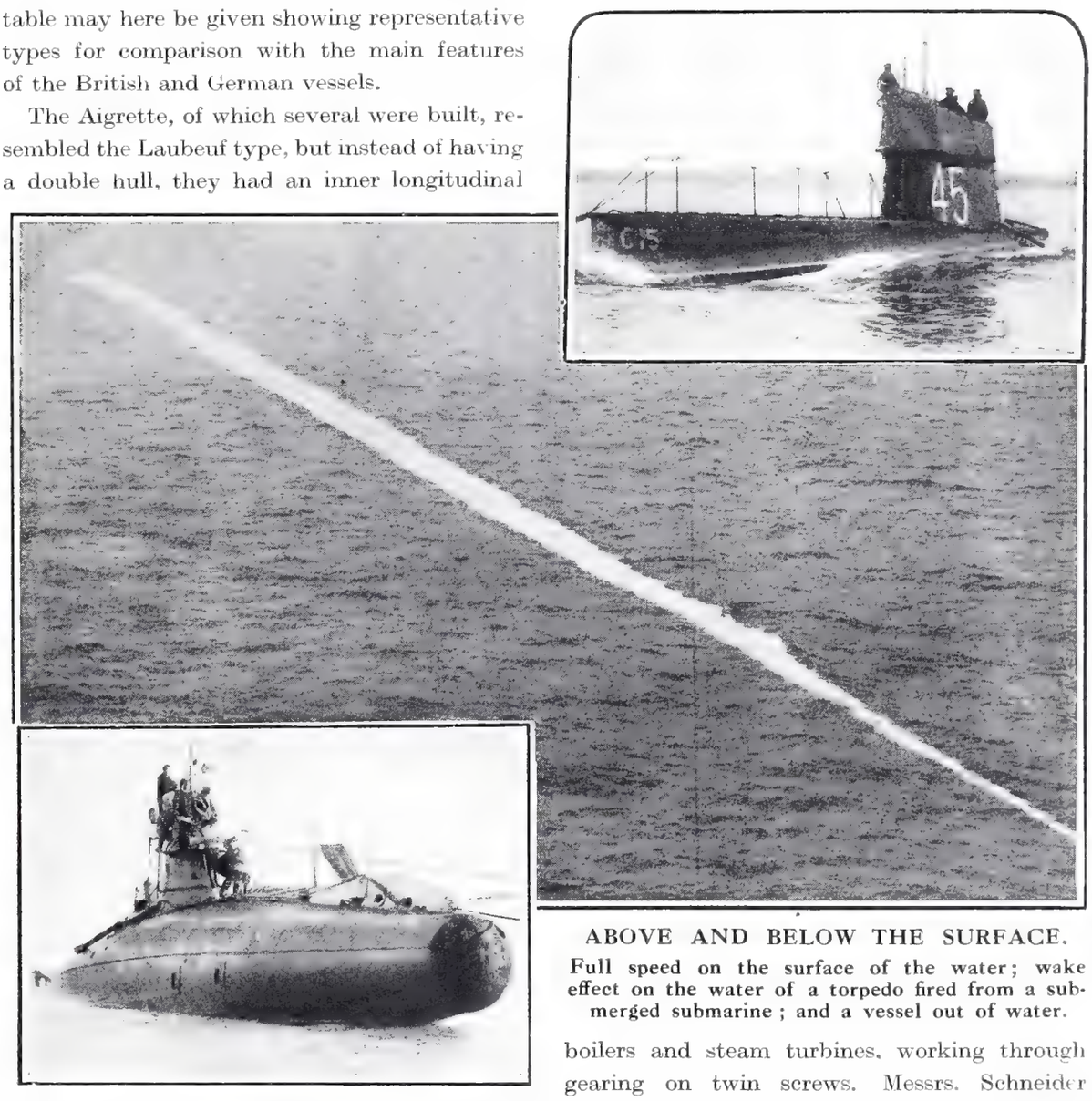
Then came full recognition in France of the idea that in view of the collective naval power of the then Triple Alliance, as compared with the French fleet, a submarine navy could alone regain the balance. *Le Matin* raised a sum of £12,000 by public subscriptions, and two electric submarines were built. From this time forward there was great activity, and twenty boats were provided for in the Budget of 1901—the year when Britain began submarine building. These were all practically alike, designed by Romazatti, and were known as the Naiade class. They were 77 ft. long, and of 68 tons displacement on the surface. Most

of these boats were modified during construction, and many were fitted with benzoline engines, but these did not prove successful. There was later a return to varied types of craft, and it is not possible, within reasonable limits of space, to give particulars of all, but a table may here be given showing representative types for comparison with the main features of the British and German vessels.

REPRESENTATIVE TYPES OF FRENCH SUBMARINE VESSELS.

Year.	1901.	1904.	1907–1912.	1913.
Name	Naiade	Aigrette	Pluviose Class	Gustave Zédé Class
Length	77 ft.	117 ft. 6 in.	160 ft.	239 ft. 6 in.
Breadth	7 ft. 6 in.	12 ft. 9 in.	16 ft. 4 in.	19 ft. 8 in.
Depth	7 ft. 11 in.	8 ft. 4 in.	13 ft. 6 in.	14 ft. 4 in.
Displacement surface	68 tons	175 tons	398 tons	787 tons
Displacement submerged	—	220 tons	—	1,000 tons
H.P.	60	200	700	4,000
Speed on surface	8	10·5	12·5	20
Speed submerged	5	7·5	7·75	10

The Aigrette, of which several were built, resembled the Laubeuf type, but instead of having a double hull, they had an inner longitudinal bulkhead along the sides only. The absence of the double skin over the top, it was considered, reduced the draught and improved the seaworthiness. Moreover, they had Diesel heavy oil engines, which had been exhibited by German firms at the 1900 Paris Exhibition. France had to purchase six sets before they could get drawings. This class of ship only took from four to five minutes to dive, a great improvement on the twenty minutes of the earlier boats. Some of the later vessels have water-tube "express" boilers and steam turbines, working through gearing on twin screws. Messrs. Schneider have done valuable work, not only in building French submarines, but in the improving of all features of design. The Laubeuf type of submarine is constructed in this country by Sir W. G. Armstrong, Whitworth & Co., Ltd., Elswick.



ABOVE AND BELOW THE SURFACE.

Full speed on the surface of the water; wake effect on the water of a torpedo fired from a submerged submarine; and a vessel out of water.

THE FRENCH SUBMARINE "DELPHIN."

The Russians were eager to try submarines in the war against Japan, but although several, including some of the Lake type, were sent to the Far East, there is no record of war service. An electrically propelled boat of 60 tons was sent across the Siberian Railway. Her armament consisted of two 18-in. locomotive torpedoes suspended in drop collars, a system invented by Drzewiecki, who designed many of Russia's earliest boats. This boat, however, was not completed at Vladivostok in time to take part in the war. There was another vessel sent to Port Arthur, but she took no part in the war. This vessel, built in 1905, was of 200 tons displacement submerged, and had petrol engines, which gave her a surface speed of 11 knots. When being tested at Cronstadt, the Kingston valves fitted to admit water for submergence were opened when the conning-tower hatch was not closed. As the boat sank, water flowed into the hull, with the result that an officer and 23 men were lost. Many of the latter were on board for instructional purposes. This was the earliest disaster of great magnitude, and perhaps raised doubts as to whether such boats would ever be safe. In 1904 the Russians adopted the Holland type, which in Russia is known as the Biriliff type, from the Holland works there. Ships of other designs were also built, and, as with the other European nations, there was a steady advance in size and power, a few of the later ships being of 500 tons displacement, with oil engines to give a surface speed of 13 knots.

The Laurenti type of submarine boats was adopted by Italy, and many nations had one or more vessels of the same class. It has many valuable qualities. Signor Laurenti introduced the principle of two hulls, the outer of a form to give the highest propulsive efficiency and reserve buoyancy on the surface, with the minimum of draught, and the inner to minimize the internal cubic capacity while ensuring satisfactory conditions when submerged. The double skin, which is braced with stays to ensure the maximum of structural strength,

M. LAUBEUF,
The Designer of French Submarine Boats.

CAESAR LAURENTI,
Designer of Italian Submarine Boats.

THE SINKING OF A GERMAN PIRATE SUBMARINE BY A BRITISH DESTROYER, MARCH 10, 1915.

The German submarine "U12," which was rammed and sunk by the H.M.S. "Ariel" (Lieutenant-Commander James V. Creagh). The H.M.S. "Ariel" is seen on the left, slightly down by the head, owing to impact with the submarine. The periscope of the "U12," which was bent right over, prevented the conning-tower lid being opened. The boat on the right is the H.M.S. "Attack." Inset is Lieut.-Com. Creagh.

THE FRENCH SUBMARINE "OPALE."

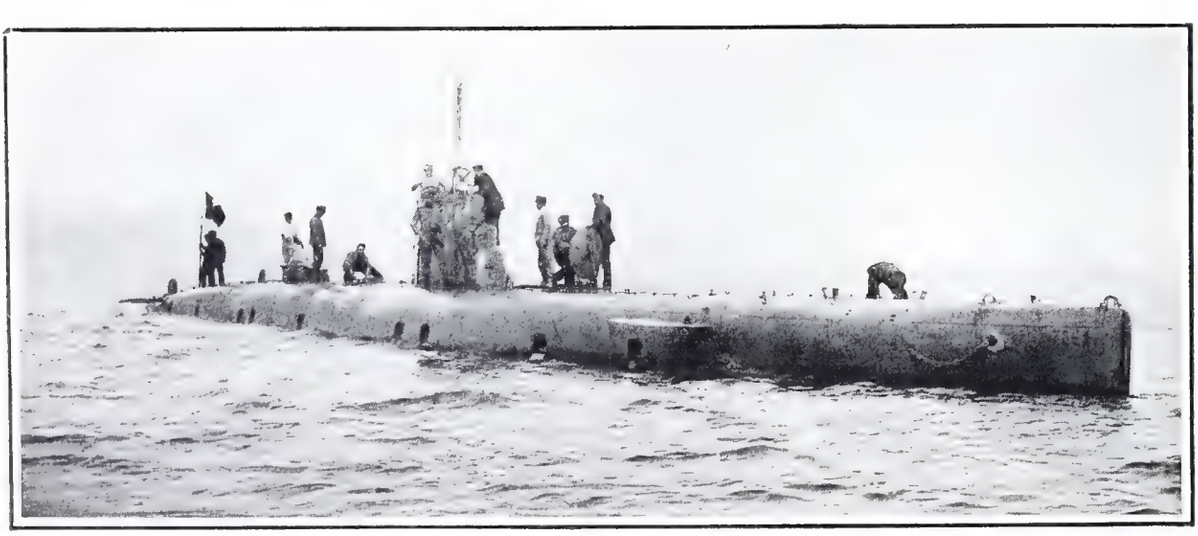
is confined largely to the central part, and the space between the two skins, up to the water-line on surface displacement, is utilized to form water-ballast tanks for submergence. Kingston valves are fitted at the turn of bilge on each side for the flooding of the compartments, and the structure is made sufficiently strong to enable the water to be pumped out without danger of collapse due to the pressure of the sea water on the outer skin. Compressed air can be, and normally is, used for expelling the water when the boat is to return to the surface. Hydroplanes are fitted for diving. Over the central part of the ship there is a double decking, with lattice bracing, and valves are fitted on each side above the water-line, through which water enters and leaves respectively for the submergence or emergence of the vessel, which is effected on an even keel. This double decking extends practically from bow to stern. Vertical bulkheads divide the hull into several compartments. While the German boats have generally a sheer at the forward end, and the French boat a downward curve, the Laurenti boat has the top level right to the stem.

Beginning with vessels of 120 ft. long in 1906, the size of Italian boats had advanced to 148 ft. in length, with a speed of 16 knots on the surface, and 9 knots when submerged; but it is understood that a Laurenti type of boat being built in Italy for Germany was completed after the outbreak of the war, and added to the Italian Navy. This was of U33 class, 835 tons displacement submerged, while the Fiat engines of 4,000 h.p. gave a speed on the surface of 20 knots. The Fiat San Georgio companies contributed greatly to the success of submarine boats. The Laurenti type is built in this country by the Scotts' Shipbuilding & Engineering Co., Ltd., Greenock.

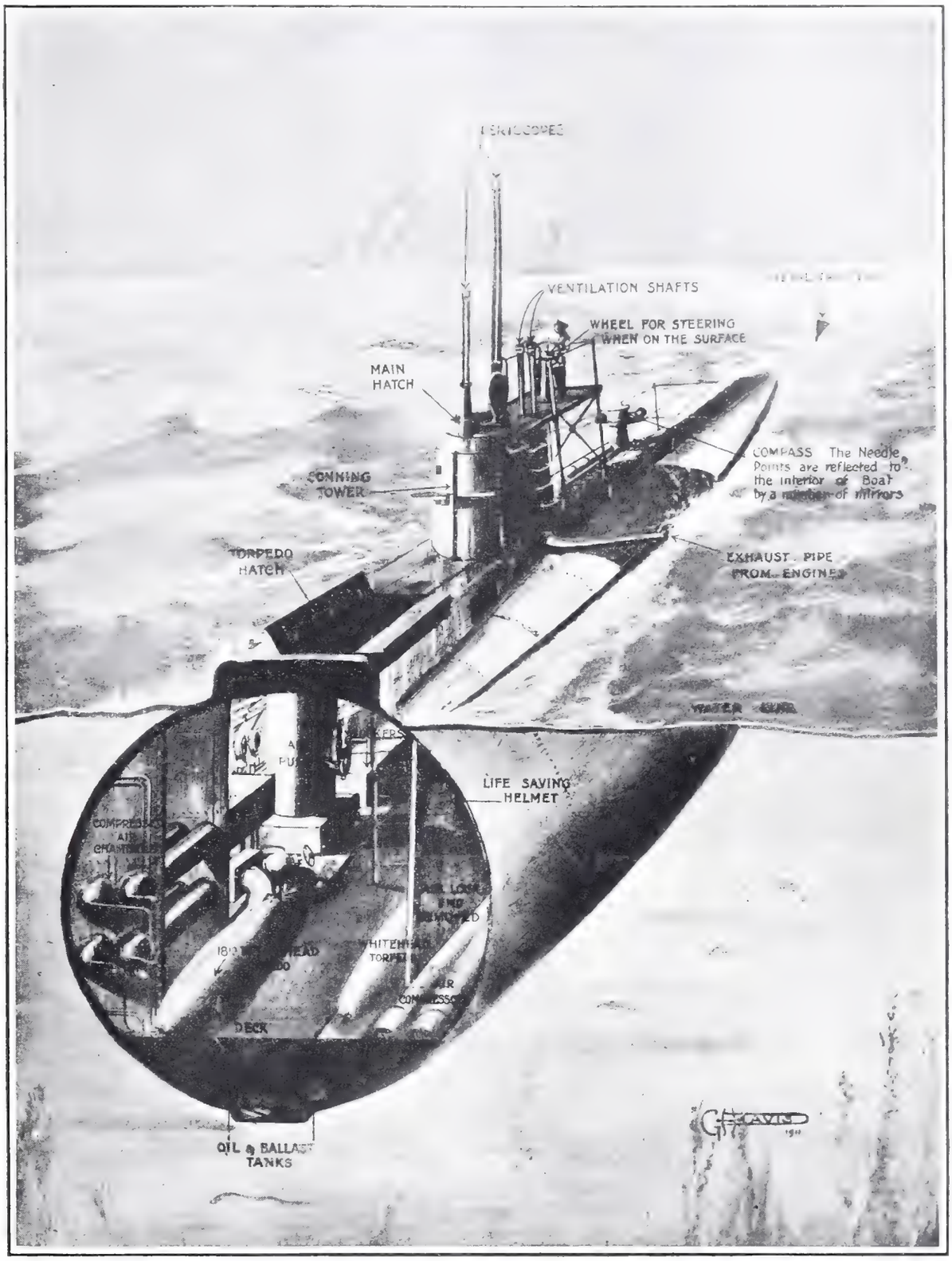
As to the strength of the submarine fleets of the Powers, we give in the table on p. 106 the numbers of the principal Powers as given in a British Government report, issued a few months before the war. We have arranged these according to the year of completion, as this affords some indication of the size, speed, radius of action, and power.

There is also shown the number of boats building in April, 1914. There is room for doubt as to whether the figure given for Germany—14—is not greatly understated. In any case, it is known that many new boats were completed after the outbreak of war, and many more were laid down.

The manufacture of the machinery takes the



AN ITALIAN SUBMARINE.
Ready to dive.



A SUBMARINE SHOWN IN SECTION.

The above illustrates the interior of a submarine, showing under the water the oil and ballast tanks, the deck tanks for compressed air, two 18-in. Whitehead torpedoes, compressed air chambers, and air pump; and above the water-line the periscopes, the torpedo hatch, conning tower, main hatch, ventilation shafts, and wheel for steering when on the surface.

longest time, not only because of its intricacy, but because of its construction, and experienced workers must be employed for this work, as well as for the building of the hull. Germany had an advantage, as the Diesel engine was more favoured in Germany than elsewhere, probably because of the relative scarcity of good steam coal and its higher price. More firms were engaged upon its construction, and thus it was easier to increase suddenly the output.

But even so, it is doubtful if a submarine could be completed in Germany under seven or eight months, and thus the "Submarine blockade" may have been timed to begin on February 18 because there were then becoming available submarine boats laid down before and at the commencement of the war. The Germans probably laid down a great many boats at once, and from April, 1915, onward there was a steadily increasing augmentation of the submarine fleet. A greater difficulty was the training of officers and men for a great accession to numbers of boats.

The Armament of Submarines.

The principal weapon of all submarine boats is the torpedo. There are many types, but here we are only concerned with those used in submarine boats. The generic type is that invented by the English engineer, Mr. Robert Whitehead, when engaged as the manager of a factory at Fiume. The Germans adopt the Schwartzkopf, and the Americans have the Bliss-Leavitt, in which an important difference is the use of turbines of the Curtis type for propelling the torpedo, but with compressed air instead of steam, as in surface craft.

The Whitehead torpedo originated in the mind of an Austrian naval officer, Captain Lupuis, who, as the result of a series of experiments, evolved a floating weapon which had, at the forward end, a charge of gunpowder, to be automatically fired by a piston detonator on contact with the enemy's ship. The propulsion of the weapon was to be achieved by the use of clockwork, while the vessel was guided along or near the surface of the water from a fixed base by means of lines or ropes. The idea was acceptable, but the method of propulsion and guidance precluded complete success from the practical point of view. Captain Lupuis recognized that success depended upon the torpedo being entirely independent of outside aid after being sent on its trip, and he was fortunate in securing the cooperation of such an ingenious engineer as Whitehead to devise the mechanism not only for self-propulsion and steering, but ultimately also for the maintenance of the depth within predetermined limits, and for securing safety before the torpedo entered the water, and certainty of explosion only when the object to be destroyed was struck. The first Whitehead torpedo was a pronounced success. It was of steel, was 14 in. in diameter, and weighed 300 lbs. It carried a charge of 18 lbs. of dynamite, and the engine was driven by air, stored at a pressure of 700 lbs. in a chamber made of ordinary boiler plate. The speed was six knots, but the range was very small.

Submarines of Belligerent Fleets shortly before the Beginning of the War.

Year of Completion.	Great Britain.	France.	Russia.	Italy.	Germany.	Austria.
1905 or earlier	9	7	—	2	—	—
1906	12	2	11	1	1	—
1907	7	6	3	1	—	—
1908	6	10	4	3	1	4
1909	16	6	1	—	2	2
1910	8	2	5	—	4	—
1911	3	7	—	2	4	—
1912	3	10	—	3	6	—
1913	5	—	1	6	6	—
Building April, 1914 ...	27*	25	18	2	14†	9
	96*	76	43	20	38†	15
	235				53	

* Exclusive of two Australian boats.

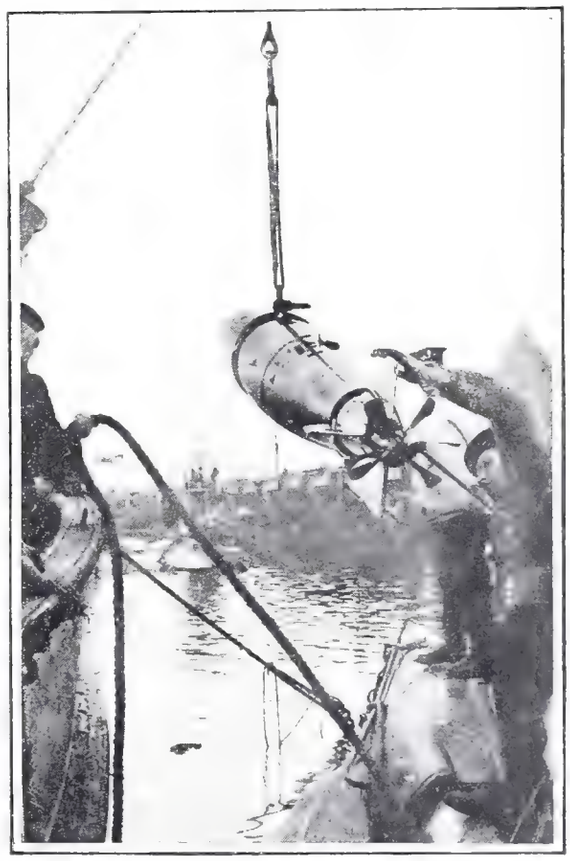
† Exclusive of one Norwegian boat building in Germany, absorbed into the German Fleet.

In this first instrument there was no attempt to introduce mechanism for maintaining the depth of the torpedo below the surface at a predetermined level. That came in 1868, as the result of very careful experiments. By this time, too, it was discovered that guncotton was preferable to dynamite, and the power of the propelling motor was increased so that the speed was maintained at 8½ knots for 200 yards or at 7½ knots for 600 yards. It was a torpedo 14 in. in diameter, with these characteristics, which demonstrated in tests before a British Admiralty Committee the potentialities of the Whitehead torpedo, the secret and right of manufacture of which were then bought for £1,500. From this time forward many improvements were made. By 1876 the speed had been increased to 18 knots for a distance of 600 yards, and the charge of guncotton in the warhead was advanced to 26 lbs. In 1884 the speed had gone up to 24 knots at 1,000 yards range, and by 1889 to 29 knots for the same range, while the charge was 200 lbs. of gun-

cotton. The greater speed was largely a result not only of the increase in size (the torpedoes having become of 18 in. diameter), but of augmentation in the power of the propelling engines—manufactured to work with compressed air—and also of the introduction of twin three-bladed propellers. The most recent advance has been a consequence of heating the air used in the propelling engine. Now the torpedoes of 21 in. diameter are capable of achieving a speed of almost 45 knots for the first 1,000 yards of the course, reduced to 40 knots at 1,500 yards, and 38 knots at 2,000 yards, while the range has gone up to over 4,000 yards, the speed at that distance from the point of discharge being 28 knots. It will be understood that the reduction in speed is consequent on the use of the compressed air causing a reduction in the pressure, which, when the torpedo first leaves the submarine, is as high as 2,250 lbs. per sq. in. The normal explosive charge is about 330 lbs. of guncotton.

The torpedo of the present day has a diameter of 21 in. Its form has been evolved from Nature. The earlier torpedoes were made with a fine entry, but tests showed that a bluff head following the lines of the fish, reduced the resistance to passage through the water. The torpedo, however, at the after end tapers away to a fine point, round which a tail-piece carries the propellers, etc. The shell is built up in sections, and non-corrosive metal is used not only for the outer skin, but, as far as possible, for the internal mechanism, so that there may be little or no deterioration during storage. There are five main sections from bow to stern. First, that containing the charge and the mechanism for exploding it on contact with the ship; second, the chamber for the storage of the compressed air for driving the propelling machinery; third, the chamber in which is enclosed the balancing gear, to ensure that the torpedo will travel without variation at a given distance from the surface of the water; fourth, the engine room; and fifth, the buoyancy chamber. There are variations in the length of the air chamber, in order to increase the explosive warhead. It is possible that the great damage done to some of our larger ships by German submarines, and the short period which elapsed before they sank, were due to the use in this way of an excessively large volume of explosive compound, as well as to its particular composition. This increase of explosive charge is, it is true, at the expense of the range, as the reduction in the size of the air chamber lessens the time which the propeller engine can be run. This shortening of the range, however, carries little disadvantage when the vessels to be attacked are unarmed merchantmen, as the submarine boat can risk much against an unarmed vessel by getting close to her. It is possible, further, that the German submarines use two different types of torpedoes, one for short range, to attack defenceless vessels, and the other for long range, to attack warships.

In connexion with the warhead it will be understood that it is of the highest importance that there should be no detonation of the charge until the torpedo has actually struck the object to be destroyed. Thus safety has to be ensured during the loading of the torpedo into the tube, out of which it has to be fired from the submarine, and, further, it must be provided that contact with any light object during its transit should not cause detonation. Where tubes are fired from the decks of vessels, as in the case of torpedo-boat destroyers, there is a further precautionary measure to ensure that there will be no possibility of the explosion of the charge when the torpedo first strikes the water. The striker



TORPEDO BEING LOWERED ON BOARD A SUBMARINE.

AN ITALIAN TORPEDO BOAT DIVING.

serves as a simple hammer, usually igniting fulminate of mercury, which in its turn acts on a primer charge of dry guncotton enclosed in a tube to the rear of the striker, and this in turn explodes the main charge. The striker, to begin with, has a pin which keeps it in position until the torpedo is comfortably placed in the tube from which it is to be ejected; this pin is then removed. Next the striker is gently moved to a position where it is free to be driven into the detonating tube by the working of a fan rotating by the movement of the torpedo through the water. In order that the blow on the ship may be a direct and not a glancing one, there are mounted "projections" or "whiskers" on the point, so that should the torpedo strike the vessel at an acute angle it will incline almost to right angles at the moment of impact. The precaution against explosion due to contact with a light object floating in the water is the provision of a pin through the primer, which, however, is broken or sheared when a heavy object, such as a ship, is struck. This last shearing is done by the primer receding with the great force of impact into its tube to detonate the fulminate of mercury.

The balancing of the torpedo horizontally at a predetermined depth under the water surface was long maintained as a great secret, but this is no longer the case. It is a simple contrivance, consisting of a valve on the outer surface of the torpedo. This recedes into the interior when too great a depth is attained, this action of the valve being consequent upon the increase in the hydrostatic pressure, due to the increased depth at which the torpedo is running. Conversely, if the torpedo rises above the predetermined level, the reduction in the hydrostatic pressure causes the valve to lift. The depth under the surface at which the torpedo is to travel is fixed by the setting of a spring on the valve spindle; the degree of compression of the spring determines the increase or decrease of hydrostatic pressure necessary to operate the balancing mechanism. The valve is connected to a vertical lever held in a truly vertical position by a pendulum weight, which is free to rock. To this is pivoted a bell-crank lever, the outer end of which is connected to the horizontal rudder, while at an intermediate position there is a connexion to the hydrostatic valve. When the valve moves, due to the torpedo running deeper in the water and consequent increase in hydrostatic pressure, the bell-crank lever is thrown with its top end towards the stern, and thus it operates the horizontal rudders used for deflecting the vessel downwards. If, on the other hand, the torpedo tends to rise to the surface, the valve moves outwards, the lever is drawn towards the bow, moving the bell-crank lever and the horizontal rudders in the opposite direction, to ensure that the torpedo will take a downward course until the required level of progression is reached again.

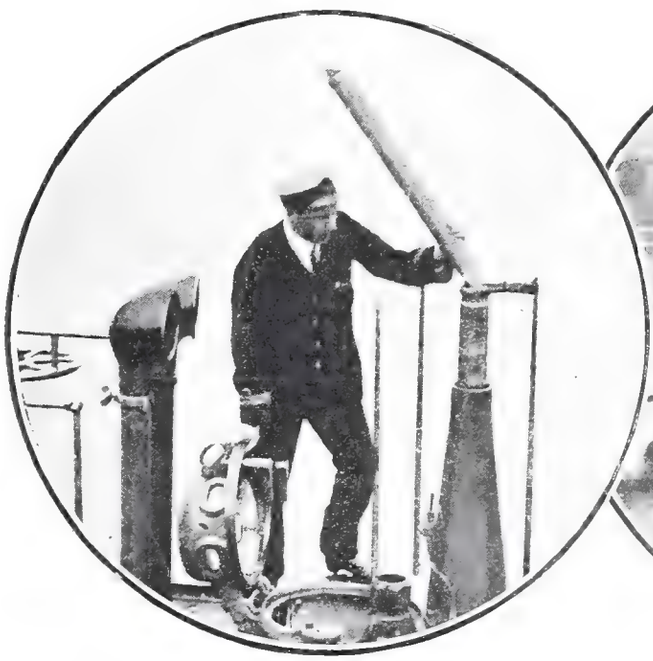
The propelling engines were, until recently, always of the piston type, the cylinders being set radially, and these worked most satisfactorily and at exceptionally high speed—over 2,000 revolutions per minute. Great success has been achieved in reducing the weight for a given power, the later torpedoes having engines giving more than 1 h.p. per lb. of weight. The Americans in their air turbines claim to get 1 h.p. per $\frac{1}{2}$ lb. Provision, of course, is made to ensure the minimum of leakage from the air chamber to the engine. The air is charged into the air chamber before the torpedo is placed in the tube, from air-compressing plant. As it is not desirable that the engine within the torpedo should start running before the torpedo has got some distance away from the ship, arrangements are made to delay the admission of air to the propelling engine. As the torpedo leaves the tube a projection on it acts automatically to lift the valve admitting air to the engine, but there is an ingenious obstruction, a "delay action" valve, to the passage of the air. This obstruction is removed by the action of a tripper, which is thrown over by the torpedo striking the water. Then only can the engine begin running, and thus there is obviated all possibility of the torpedo when not in the water being injured by the immense speed of the propellers—2,000 revolutions per minute in water, but enormously greater in air.

The Servo motor was introduced in 1876 to increase the power of the rudders. The Servo motor acts in the same way as the steering engine in magnifying the power of the helmsman on surface craft. In 1899 there was introduced a further improvement in connexion with the automatic steering apparatus, consisting of the application of a gyroscope, by means of which the causes of erratic running—deflection of the torpedo on entering the water, dents (particularly in the tail), variation in the speed of the propellers, or imperfect balancing—are nullified. The gyroscope is simply a heavy flywheel supported on gimbals with very fine points, giving it a very delicate suspension, so that friction is practically non-existent. The wheel is set spinning by a powerful spring as the torpedo leaves the tube, and it continues rotating at 20,000 revolutions per minute. Thus it is given a directive force maintaining in a true line the axis of the wheel, which is coincident with the longitudinal axis of the torpedo. Notwithstanding any change in the direction of the torpedo the axis on which the gyroscope revolves remains constant by reason of the velocity of the wheel. At the point of suspension of the gimbals there is a vertical rod connected to the valve working the air cylinders actuating the vertical steering rudders. Thus any change in the relative axes of the gyroscope and the torpedo causes the air motor to move the vertical rudders until both axes again coincide.

The buoyancy chamber, which is the sternmost of all the compartments, serves the purpose of giving the necessary buoyancy to the torpedo. The propellers are mounted on what is termed the "tail piece," which forms a continuation of the buoyancy chamber. This tail supports two propellers, the vertical rudders, the horizontal rudders worked by the balancing mechanism, and the fins worked by the gyroscope. The whole of the units are protected by a framing. The propellers and rudders are well shown in the view of a torpedo on page 107.

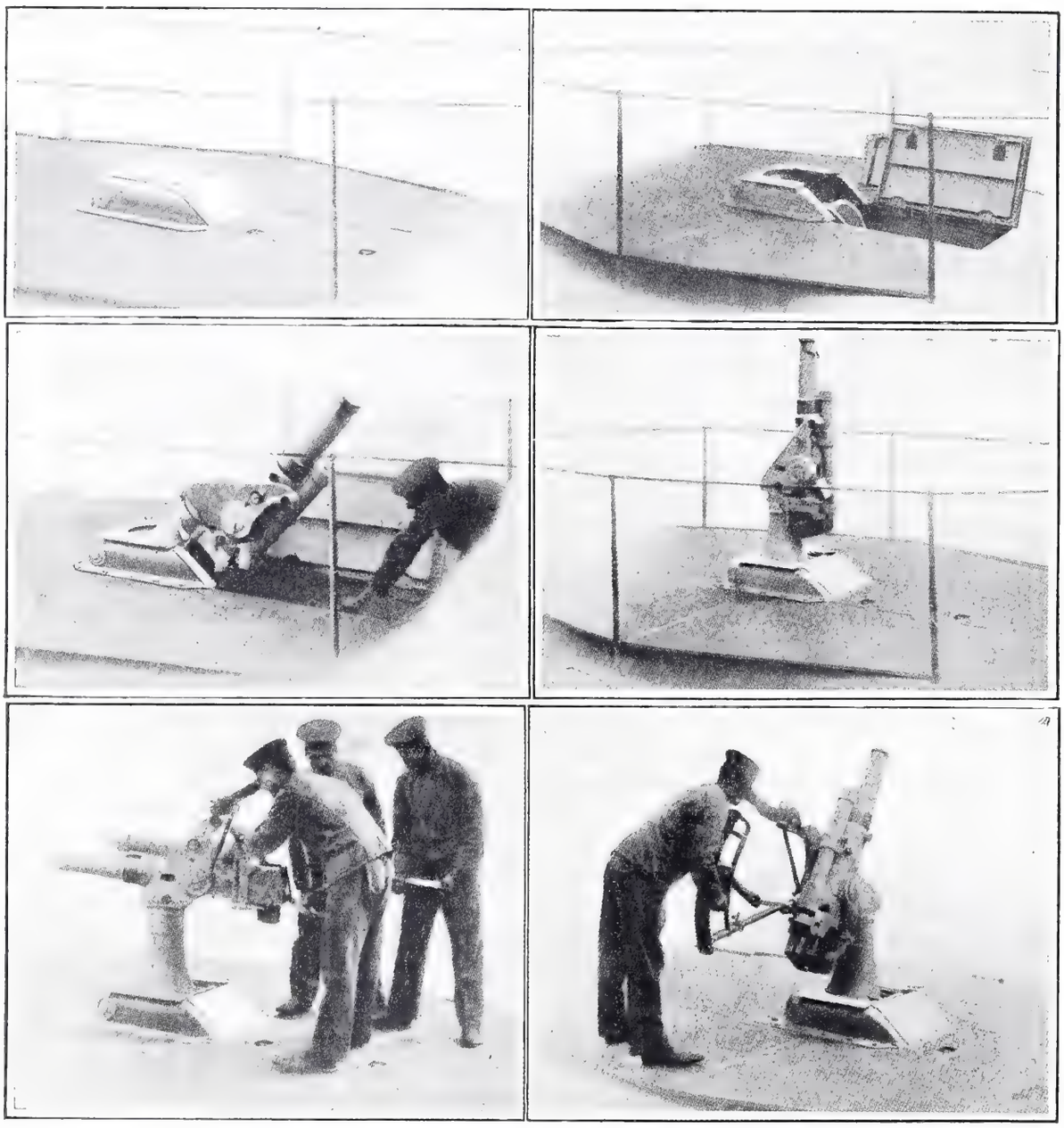
It may be added that mechanism is fitted so that the torpedo can be brought to rest at a predetermined distance in practice firing, and that arrangements are made so that if the torpedo fails to reach its billet it will sink.

As regards the guns fitted on board submarine boats, Britain was the first to apply this form of armament, and the Germans, immediately on hearing of this procedure, took steps to arm their later vessels. Their guns, which are of 2·95-in. bore, are mounted so that they can be lowered into a recess in the deck of the vessel—as shown in the longitudinal section of a typical German submarine boat on page 97—between the upper deck and the inner hull. The gun arrangement is illustrated in six views on page 110. Fig. 1 shows the cavity for the gun entirely closed, while Fig. 2 shows it open, and the first movement in connexion with the raising of the gun. For the raising and lowering of the gun the lower part of the mounting turns in a bearing contained in the



THE EYE OF THE SUBMARINE.
Removing the periscope.

ON SUBMARINE "D4."
Quick-firing guns.



ON A GERMAN SUBMARINE.

A 3·7-cm. (1·456-in.) gun fitted on a fixed pivot mounting, having a total weight of 365 kg. (584 lb.). It is carried on top of the fixed mounting in a cylindrical cradle, in which it slides backwards and forwards when in action. *(By courtesy of "Engineering.")*

forward part of the fixed foundation seen in Fig. 2. A spring buffer raises the gun automatically into a vertical position. Fig. 3 shows the gun in the process of rising. When the gun has been brought to the vertical position, it is held fast by spring catches, which come into play immediately it reaches the position shown in Fig. 4. These spring catches have to be disengaged when it is desired to rehouse the gun for submarine navigation. When raised to the highest position, sights and shoulder rests have to be fitted, and with these the gun is rotated and elevated. It is stated that the gun may be raised and got into position for training in twenty seconds, and that it can be stowed away in a corresponding time.

As to the gun itself, it is fitted with a wedge breech block, which moves vertically instead of laterally—as with most of the Krupp guns for other purposes. The cradle is cylindrical, surrounding the gun tube itself, and having the usual trunnions in the brackets of the gun supports. The recoil cylinder and the run-out springs are shown in several of the views. The pedestal carries on the top a pivot bearing. The various views show the range through which the gun can be elevated. It will be seen that it can be used against air craft. The total weight of the gun, as illustrated, is 1,895 lbs., and it fires a projectile of $12\frac{3}{4}$ lbs. The penetrating power cannot be great, so that success can have been achieved

in attack even on merchant ships only at very close range.

In nearly every fleet there are parent ships auxiliary to the submarine fleet and to serve as floating bases, having spare parts and stores, including torpedoes and machine tools for the carrying out of small repairs.

Several navies have combined a salvage and docking ship in one, and such a vessel is self-propelled and forms itself the parent ship to the fleet. One of these salvage ships is illustrated on page 112. The hull itself is formed with two side walls, having an entrance at the bow, while the extensive upper works are fitted with lifting gear, so as to raise by tackle the submarine from the bottom of the sea, in order that the vessel may be slung between the two walls of the ship, and conveyed to a port of repair. Alternatively, a floating submarine may be hauled through the bow opening between the side walls for the purpose of having the outer hull fittings repaired or painted. It will be seen that the ship is in every respect a sea-going craft, fitted with wireless telegraphy. The submarine is shown being drawn between the two side walls. There is a double bottom, so that when the water is pumped out of the two side walls of the ship, the bottom is above water level, the whole of the hull of the submarine being exposed.

The Germans have adopted many systems of meeting possible disaster. In order to enable the vessel to remain submerged for a prolonged period, either between the surface of the water and the bottom of the sea, or at the bottom of the sea, they have introduced a system of purifying the air. The vitiated air is circulated by fans through a row of cartridges filled with potash, to absorb the carbonic acid and the moisture, etc. The purified air leaving the cartridges has oxygen added to it from special reservoirs. Separate small cartridges of the same character are supplied to each man, so that in emergency—for instance, when fumes arise through the overturning or spilling of the contents of the accumulator batteries—the men may put the cartridges before their mouths and inhale purified air. Air-purifying vessels with tubes are also supplied to the men, so that they may exhale or inhale through the tubes. Corresponding means are adopted in practically all submarines in order to overcome the effects to which we have referred, but in the British practice it has been found that by isolating the accumulators in separate compartments there is little chance of such fumes finding their way into the inhabited compartments of the ship, so that here, as in other respects, the principle has been adopted of meeting contingencies before they arise, rather than of devising means for counteracting the dangerous effects of such contingencies.

The Tactical Work of the Submarine as Influenced by Design.

Such success as the submarine boat has achieved is due to the quality of invisibility which it possesses rather than to what might be termed the capacity for direct frontal attack. The handicaps imposed on the submarine are its vulnerability to attack by ramming or by gun power, its low speed relative to that of torpedo-boat destroyers and cruisers, the insufficiency of its gun power and the relatively short range of the torpedo, its inability to fire the torpedoes at all arcs of training, and its comparatively wide turning circle. The fact that British merchant ships of comparatively low speed have been able to escape from German submarines, and that at least one merchant ship rammed a submarine, is proof of these latter two disabilities. The case of the Thordis, which rammed a submarine on March 4—for which the captain and crew were honoured, the former being made a lieutenant of the Naval Reserve, and, along with his crew, getting a large monetary reward—should be encouraging for others. There are many other cases which show that difficulties due to slow manœuvring beset submarines.

The submarine has often been regarded as an under-sea torpedo-boat, but its deficiency in speed is much against its utility for attacking warships on the surface. Many destroyers during the war attained speeds of over thirty knots, some of them as much as thirty-five knots. They manœuvred very easily, and proved in many cases capable of ramming submarines. A notable instance was that of the Badger, which on October 25 accounted for one of the German submarines, whilst the Garry, on the 23rd, rammed the U18 off the north coast of Scotland, saving all the crew except one, who remained on board to open the Kingston valve, in order to ensure that the vessel would sink. H.M. Destroyer Ariel also bagged U12 on March 10, all officers and crew being taken prisoners. A

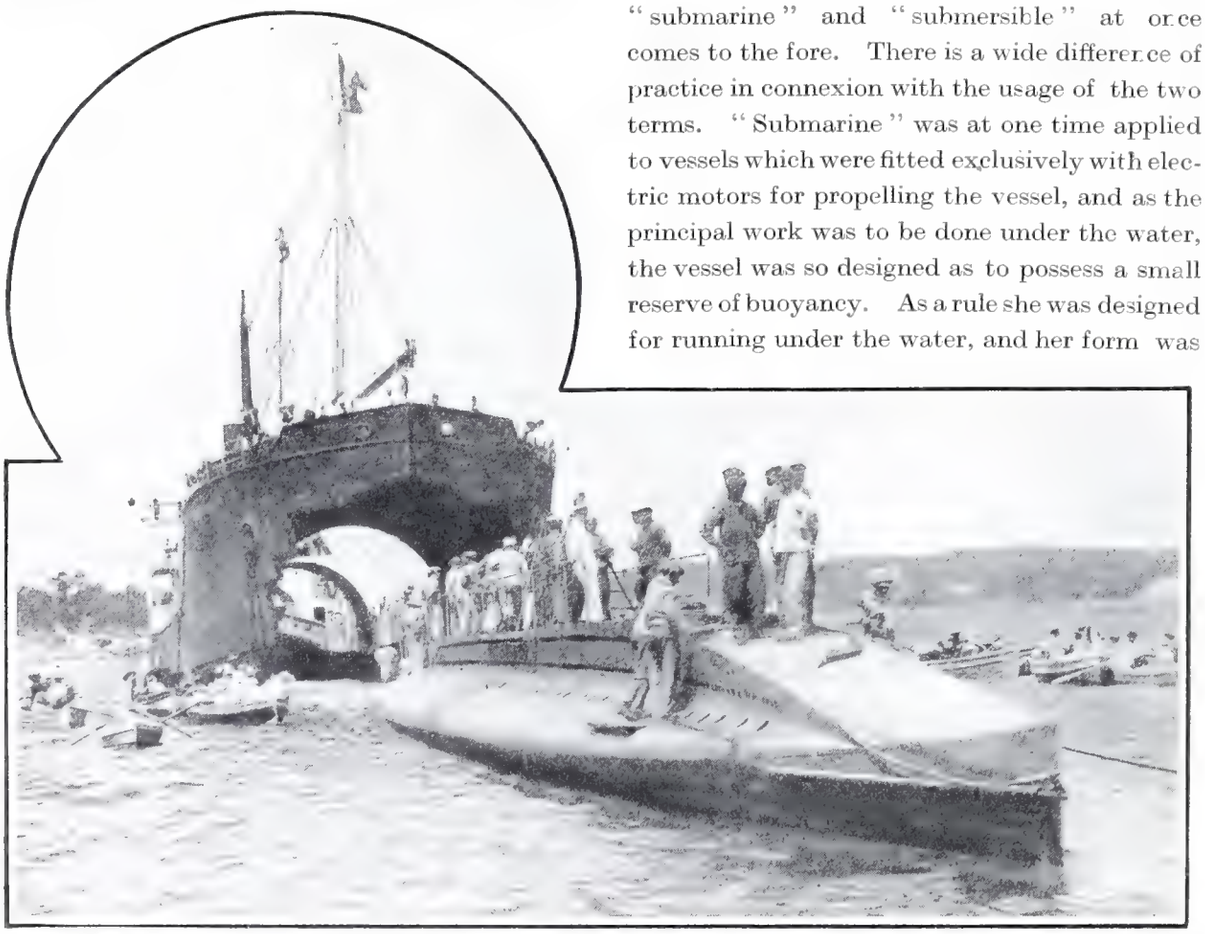
destroyer steaming at 32 knots approaches a submarine at 54 ft. per second, and should the submarine be travelling on the surface, with her masts and other gear in position for surface navigation, the time taken to dive cannot be short of a minute, even presuming that no attempt is made to lower the mast and make everything on deck secure. It is therefore obvious that the submarine is at a great disadvantage.

As regards comparison with light cruisers, the case is nearly as pronounced as with torpedo-boat destroyers, and the success of the Birmingham in sinking U15 on August 8 was due to the difference in speed. As regards the range of the torpedo, the war has shown that the gun, by reason of the efficiency of control and aiming, is capable of accurate hitting at a much greater range, so that the submarine, even when present, has had little chance of being effective in fleet actions. The velocity of the present-day torpedo enables it to reach an object at 6,500 yards in about four minutes, but a projectile from a 12-in. 50-calibre gun can travel that distance in nine seconds. In an open fight it would be possible to aim and fire a 12-in. gun at a submarine after her torpedo had been discharged and before it reached its billet. Vice-Admiral Beatty, in his dispatch on the fight in the Bight of Heligoland, stated:

> I did not lose sight of the risks of submarines and a possible sortie in force from the enemy's base, especially in view of the mist to the south-east. Our high speed, however, made submarine attack difficult, and the smoothness of the sea made their detection comparatively easy. I considered that we were powerful enough to deal with any sortie except by battle squadron, which was unlikely to come out in time, provided our stroke was sufficiently rapid.

In this connexion the photograph which we reproduce on page 101, showing the wake of a torpedo, due to the exhaust of air after it has operated the propeller, indicates that under certain conditions the presence of a submarine and the advance of a torpedo can be detected. In the actual fight in the Bight of Heligoland a German submarine attacked the Queen Mary, but this mighty cruiser managed by rapid steering to elude the torpedo.

The question whether a submarine can be built to achieve a high speed involves the form of hull and the type of machinery. Dealing first with the former, the subject of the titles "submarine" and "submersible" at once comes to the fore. There is a wide difference of practice in connexion with the usage of the two terms. "Submarine" was at one time applied to vessels which were fitted exclusively with electric motors for propelling the vessel, and as the principal work was to be done under the water, the vessel was so designed as to possess a small reserve of buoyancy. As a rule she was designed for running under the water, and her form was



A REPAIR SHIP FOR SUBMARINES.
This vessel, which is used for carrying submarines across the seas, can also be used as a floating dock for repairs.

arranged to comply with this condition. Thus, the section was circular, and she had a straight line axis. The term "submersible" may be applied to a vessel possessing a large reserve of buoyancy, and designed for improved surface conditions, for fairly high speed, and for keeping the sea. Thus the form appertained more to that of the torpedo boat or surface vessel, so far as the outside lines were concerned. But there was introduced an inner hull, not only to increase the resistance to hydrostatic pressure when immersed at a great depth, but to provide between the two hulls water-ballast tanks for the introduction of water in order to reduce the high reserve of buoyancy to enable the ship to dive. The difference is pretty much one as to the amount of surface reserve buoyancy, and with this proviso the term "submarine" may be accepted as covering all types of under-water craft.

The tendency, however, must be towards the adoption of the same lines as surface craft, if high speed on the surface is to be realized, but this form is not conducive to a great speed when submerged. Modification, however, has to be made at the bow and stern in order to accommodate the torpedo launching tubes, and in this way there is introduced something very bluff and round-ended, quite opposite to the knife-like edge of the high-speed surface vessel. The torpedo armament provisions thus limit the speed to some extent. The desideratum is towards high speed on the surface even at the expense of speed submerged, and for the latter 8 to 10 knots may be regarded as reasonably satisfactory, with a fairly good radius of action; that is to say, with batteries sufficient for four or five hours' propulsion under the water. The acceptance of this condition is encouraged by the great weight of the electrical installation for propulsion under water. Normally the electric power in a submarine boat is only from half to a quarter that of the oil engines used for surface propulsion, but the weight of the electric motors, batteries, cables, switches, and other gear is practically twice that of the oil engines, exclusive of fuel, which necessarily varies according to the radius of action on the surface desired. If it were desired to get 18 knots under the surface as well as on the surface, the vessels would require to be quite 20 per cent. larger in displacement tonnage.

For surface propulsion the oil engine holds the field for the present. In some of the earlier power-propelled boats a steam boiler and reciprocating engines were adopted, but they were not favourably looked upon. Electricity and compressed air were also used for small craft. The introduction of the internal combustion engine in the Holland boat gave a great impetus to the use of oil engines. At first petrol or gasoline were used, pretty much as in the motor-car, but the petrol gives off inflammable vapours at atmospheric temperature, and was thus very dangerous. Paraffin engines superseded the petrol, but there was the disadvantage that while petrol, if it fell into the bilges, evaporated, paraffin lay about, and, as it ignited at a very low temperature, it also was a source of danger if naked lights were anywhere near. Engines using heavy oil were next introduced, and proved most acceptable, the heavy oil having a flash point three times that of paraffin (or from 200 to 250 deg. F.), so that the danger of fire and explosions was almost eliminated.

The oil engine is preferable to steam because there is less loss in the conversion of heat into work. In the case of the steam machinery only 13 per cent. of the heat stored in the fuel is converted into work, whereas in the case of the oil engine the percentage is between 35 per cent. and 40 per cent. The impulse given within an oil engine cylinder is due to the explosion or combustion of oil vapour above the piston, which is thus driven downwards, and by suitable mechanism the motion is converted from reciprocating to rotary on the propeller shaft.

MR. T. G. OWENS THURSTON,
Naval Constructor of the Vickers Company.

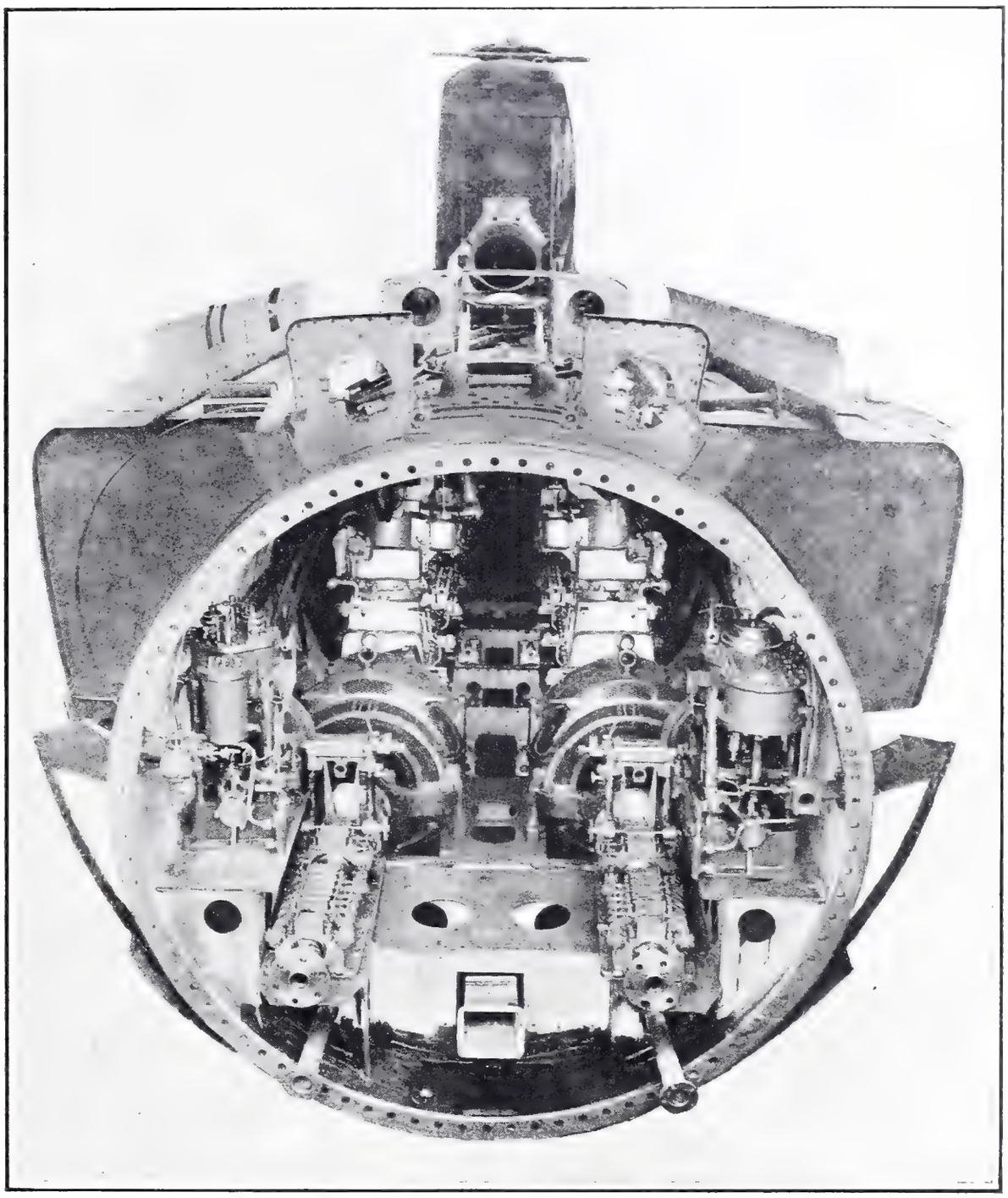
In earlier heavy oil engines the ignition of the oil was effected by flash or other separate agency. A noted German chemist, the late Dr. Diesel, modified this, and it was largely as a consequence that the use of heavy oil became possible in engines of suitable power and weight for submarine propulsion. When air is compressed it becomes heated, as can easily be tested by the use of a tyre pump. He therefore introduced the principle of compressing the air for the cylinder to a pressure of about 500 lbs. per sq. in.; this raised its temperature to about 1,500 deg. F. It is only necessary then to spray oil into the cylinder with highly-compressed air in order to ensure combustion; there is no need for separate ignition with its attendant disadvantages. As only air is contained above the piston at the full height of its stroke, there can be no premature ignition with serious troubles accruing. The impulse to the piston is more gradual because of the gradual combustion of the charge, and consequently there is less variation in stress on the working parts and bearings. The oil engine, as at present designed, is undoubtedly heavier than steam turbine installations in high-speed vessels. A fair figure for the oil engine would be 90 lbs. per horse-power, and for corresponding machinery of the steam turbine type 45 lbs. per horse-power. One pound of oil, however, used in the oil engine gives more than double the power developed by the steam turbine, the consumption of oil being about ½-lb. per horse-power in the oil engine, while for the steam turbine installation at full power the consumption of oil in the boiler is about 1·4 lb. per horse-power, and more at small power. To ensure the same radius of action, it follows that there must be carried in the steam-propelled boat nearly thrice the fuel necessary in an oil-engine propelled ship.

An interesting departure was made, prior to the outbreak of the war, in the adoption of turbines instead of oil engines for driving submarine boats on the surface, the turbines being used when desired, as in the case of the oil engine, for generating electricity to recharge storage batteries. This change, because of its potentialities is regarded as of great importance. Four turbine-driven submarine boats have been built for the French Navy. Two are of about 900 tons displacement, and the turbine engines, driving twin-screws through gearing, are to be collectively of 4,000 s.h.p.; the two others are slightly larger, and of 5,000 s.h.p. The weight of the turbine installation is said to be 60 per cent. of that of the oil engine.

The difficulty experienced in the early steam-driven submarines was that the closing down of the boiler occupied a comparatively long time; but with the modern "express" water-tube boilers of rapid evaporative quality, using oil fuel, the volume of steam or water in the boiler at any time is very small, and the supply of fuel to the furnace can be instantly cut off, so that the time taken to damp down may not be much greater than that taken at present to change over from oil-engine drive to electric drive, and otherwise to prepare the vessel for diving. The question, too, of heat may be overcome by insulation. There may, however, be greater difficulty in raising full pressure of steam in the boilers when the submarine boat returns to the surface.

Steam machinery may require more numerous and larger hull openings, and more top hamper, such as funnels, air-intakes, etc., will be necessitated, since a larger volume of air is required. Special gear will have to be devised for closing these apertures rapidly and effectively.

The subject of closing down and diving is one requiring the greatest experience in order to secure safety and rapidity. In ordinary practice submarines dive with a reserve of buoyancy, varying according to the design of the particular boat. This change in buoyancy from the surface to the submerged condition is effected by the filling with water of certain compartments. When the boat has reached a predetermined stage, so far as the degree of buoyancy is concerned, if she is not under way the electric motors are set in operation to give a forward movement, when, by the use of horizontal planes, the ship dives, the angle varying with the length of the ship, its speed and the area and angle of the planes. These planes, which are well seen in the illustration on page 117 and are controlled from inside the boat, may be placed at an angle with the direction of flow of the water, the result being a perpendicular thrust sufficient to overcome the pre-arranged reserve buoyancy. So long as the boat travels with the planes set at an angle to the horizontal the downward thrust remains effective, and the boat is able, under submerged control, to dive or rise as the angle of the planes is increased or decreased, the whole being a balance of forces at all times. For the same reason it is necessary for the vessel, even when submerged on an even keel, to keep moving, in



INTERIOR OF A GERMAN SUBMARINE

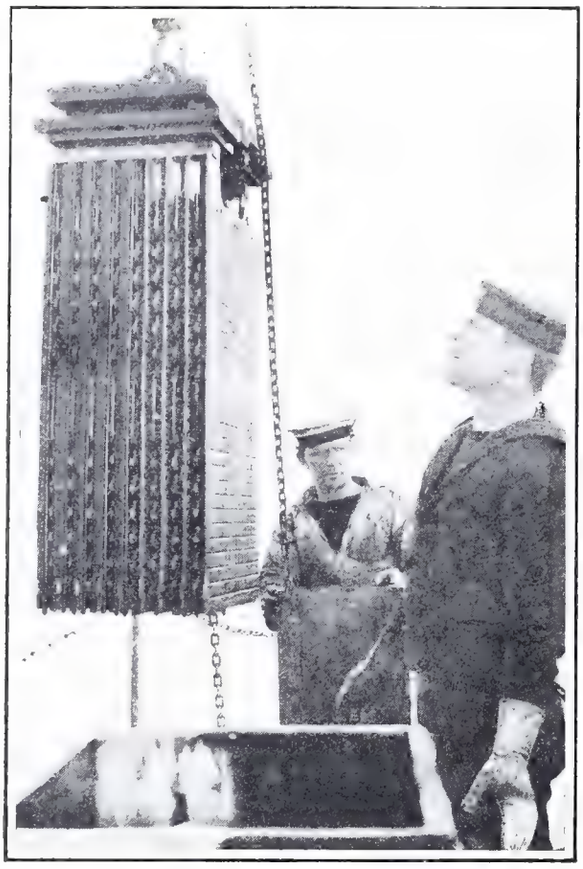
Showing the two internal combustion engines for driving the twin propellers on the surface, and the motor-generators for submerged propulsion.

order that the planes may operate to bring about the balancing of forces, and thus prevent the vessel rising to the surface.

The stability is a matter of great importance, but there exists a wide difference of opinion among authorities as to what amount should be given. A submarine can have too much as well as too little, and the most successful design is that which gives best results at sea in all weathers on the surface, and at the same time is quite satisfactory in a submerged condition. As to the seaworthiness of British boats there can be no two opinions. In one of his official dispatches Commodore Keyes wrote:

> During the exceptionally heavy westerly gales which prevailed between September 14 and 21, 1914, the position of the submarines on a lee shore within a few miles of the enemy's coast was an unpleasant one. The short steep seas which accompanied the westerly gales in the Heligoland Bight made it difficult to keep the conning tower hatches open. There was no rest to be obtained, and even when cruising at a depth of 60 ft. the submarines were rolling considerably and pumping, *i.e.*, vertically moving, about 20 ft.

Perhaps the best method of describing the mechanism for submerging the ship will be to



SUBMARINE ACCUMULATOR.
The electric storage battery leaving charging vat. The sailor is wearing india-rubber gloves.

follow the successive operations, beginning when the ship is cruising on the surface of the water with her deck and bridge showing, all hatches being open, wireless masts up, ventilators in place, etc. All gear would have to be stowed before diving. In war the chances are that the minimum amount of work would be left to be done. In the danger zone only the conning tower would be left open, allowing air to enter for the engines, all other arrangements being made for instant diving. Then three warning bells are sounded, one for the closing down of the conning tower, another for the stopping of the main propelling engines, and the third for all hands to proceed to their respective definite stations, where, as a rule, they remain during the complete watch, there being the minimum of movement while running submerged. Even when everything has to be stowed, two minutes suffice for the diving. If the vessel were running awash, with only the conning-tower hatch visible, the boat would dive, with the help of the hydroplanes, in half a minute. If running on the motors the vessel would disappear almost instantly. Various stages in diving are illustrated on pages 118 and 119.

Then all movement and action is controlled with the help of the periscope, which is a tube, varying from 3 in. to 6 in. in diameter, which can be telescoped to a height of from 15 ft. to 17 ft., and even in some cases 20 ft. At the top there are prismatic lenses or prisms, through which the rays of light enter, and are reflected downwards to a corresponding lens at the base. In some cases the tube contains magnifying lenses, the degree of magnification being in some cases five to six times the actual size. The periscope can be turned through a complete circle without the captain taking his eye from the eye-piece. In order also to enable him to concentrate his visual faculties, the periscope is usually telescoped upwards or downwards by a small motor at will. To ensure freedom from moisture, and therefore cloudy vision, the air in the periscope tube can be passed through a drying medium, such as calcium chloride, returning again to the periscope automatically. The periscope lens seen by the captain is usually graded so that the captain can estimate approximately the range. In nearly all boats now there are two periscopes, one used by the captain for guiding the ship and discharging the torpedo ahead or astern, and the other for the look out, to sweep the horizon continually in search of enemy craft. This instrument has undoubtedly proved of enormous advantage, but the task of observation imposed has been fitly and graphically described by Admiral Bacon, who in a letter to *The Times* said :

> If any of your readers wishes to appreciate some of the difficulties of submarine work, let him sit down under a chart of the Channel suspended from the ceiling let him punch a hole through it, and above the hole place a piece of looking glass inclined at 45 degrees. Let him further imagine his chair and glass moving sideways as the effect of tide. Let him occasionally fill the room with steam to represent mist. Let him finally crumple the chart in ridges to represent the waves, and then try to carry out some of the manœuvres which look so simple when the chart is spread out on a table and looked down upon in the quiet solitude of a well-lit study.

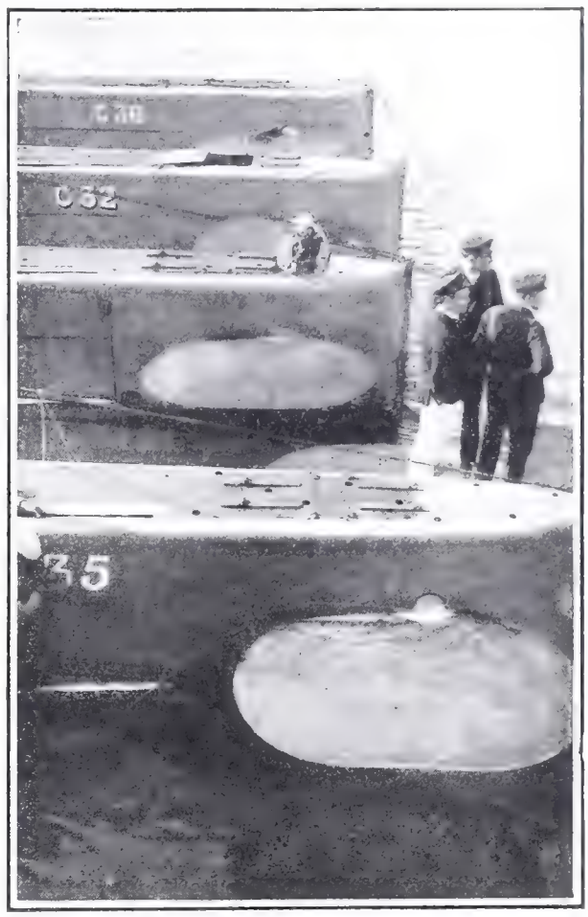
With the periscope splendid work was done by the commanding officers of submarine boats. Commander Max Kennedy Horton gained his promotion by sinking the German torpedo boat destroyer S126 running at a high speed off the Ems River on October 6, and with the same submarine, E9, he had on September 13 sunk the Hela, so that it will be obvious that, with smart officers, the periscope fulfils the requirements.

As to the depth and length of time of submergence, most of the vessels are designed to

withstand a hydrostatic pressure due to immersion to a depth of 200 ft. below the surface, which is equal to about 90 lb. per sq. in. Indeed, in some cases the vessels have actually sunk on an even keel when suddenly approached by the enemy, without even using the diving rudders. On one occasion an officer who had achieved this feat when asked how he got on when resting on the bottom replied: "I did fine; we played auction bridge all the time, and I made 4s. 11½d." Contrast this with statements in a semi-officially published interview with the captain of one of the German submarines, Commander Hansen. He is reported to have said:

It is fearfully trying on the nerves. Every man does not stand it. . . . When running under sea there is a death-like silence in the boats as the electric machinery is noiseless. It is not unusual to hear the propeller of a ship passing over or near us. We steer entirely by chart and compass. As the air heats it gets poor, and mixed with the odour of oil from the machinery. The atmosphere becomes fearful. An overpowering sleepiness often attacks new men, and one requires the utmost will power to remain awake. I have had men who did not eat during the first three days out because they did not want to lose that amount of time from sleep. Day after day spent in such cramped quarters, where there is hardly any room to stretch your legs, and constantly on the alert, is a tremendous strain on the nerves.

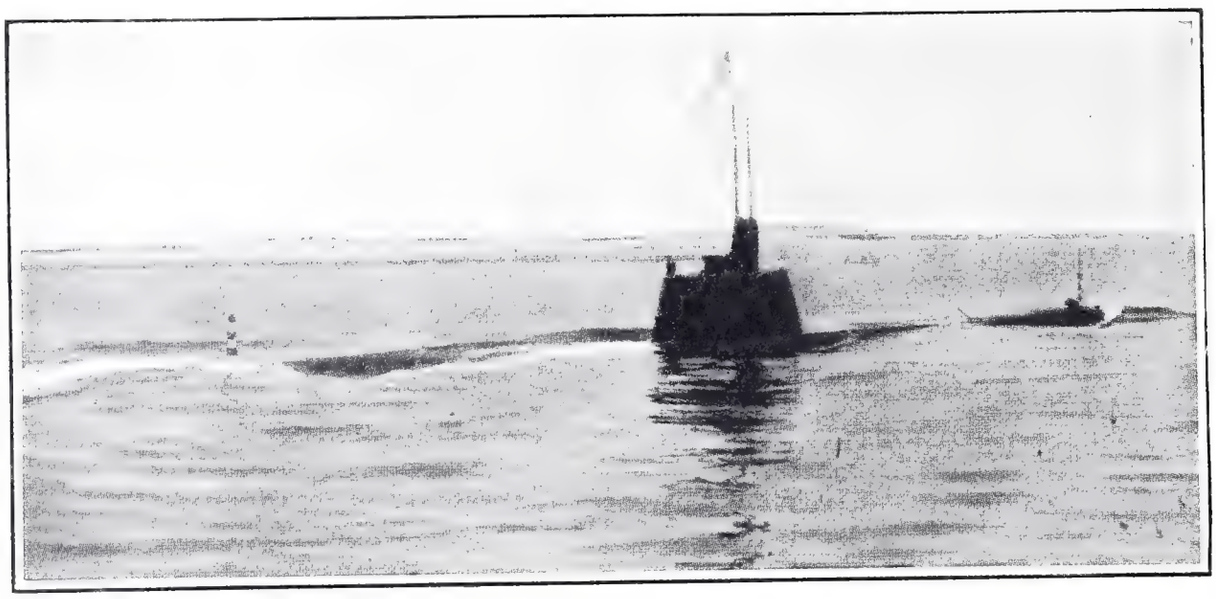
I have sat or stood eight hours on end with my eyes glued on the periscope, and peered into the brilliant glass until my eyes and head ached. When the crew is worn out we see a good sleep and rest under the water. The boat often is rocking gently with a movement something like a cradle. Before ascending, I always order silence for several minutes in order to determine by hearing, through the shell-like sides of the submarine, whether there are any propellers in the vicinity.



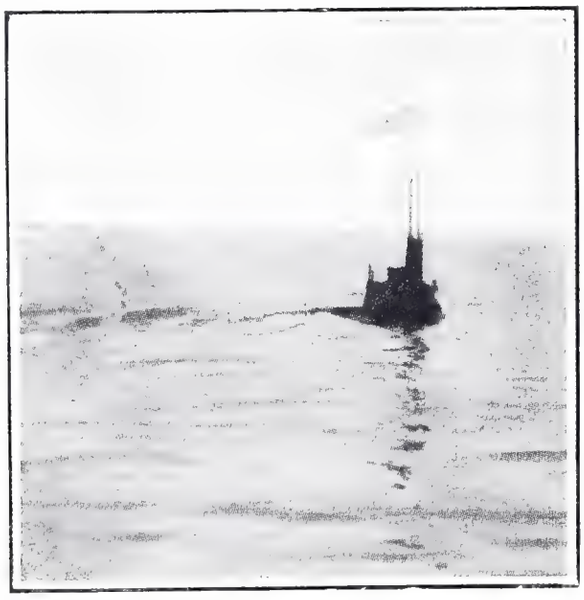
THE PLANES OF THE SUBMARINE.
Horizontal rudders which regulate the angle of descent and ascent.

Steering may be done by the gyroscopic compass, the wheel of which runs at something

ON A TORPEDOED PASSENGER STEAMER.
While on a passage on October 26, 1914, from Ostend to Havre, the passenger steamer "Amiral Ganteaume," with 2,000 unarmed Belgian refugees on board, including a large proportion of women and children, was torpedoed by the Germans without warning. The above illustration shows a portion of a German torpedo found on the steamer after she was struck, which proves the German method of attack.



First stage: Angle ½ degree.



Third stage: Angle 2 degrees.

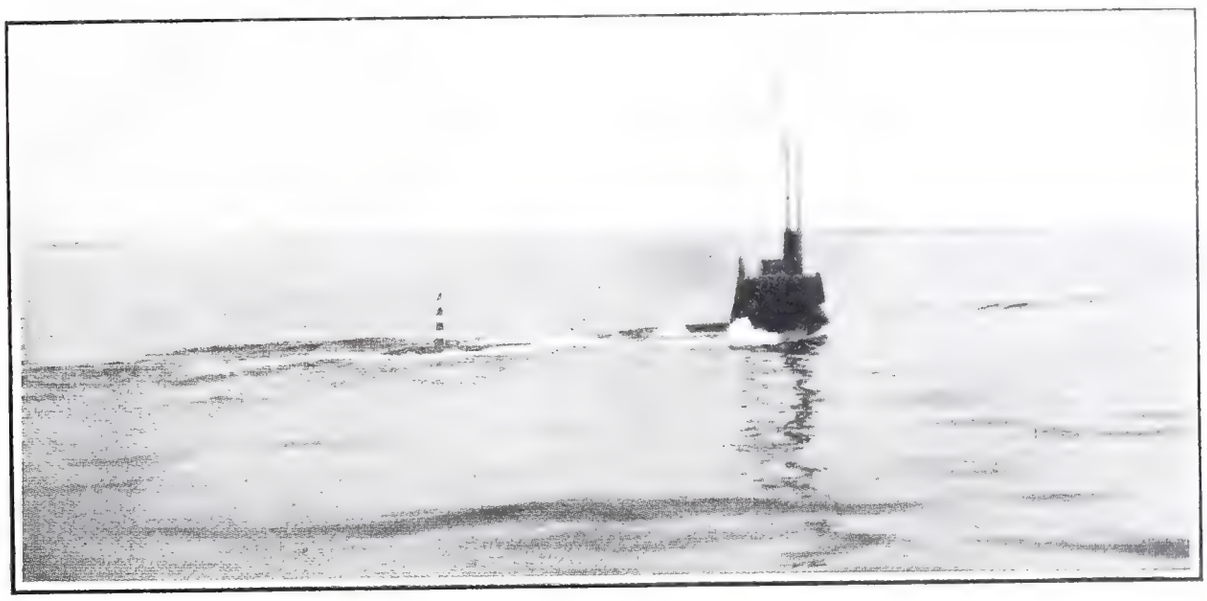
Completion of the dive.

SUBMARINE BOAT

approaching 20,000 revolutions per minute. One of the finest performances submerged was that of B11 (Lieutenant Holbrook), who penetrated the Dardanelles, diving under the mines, and seriously injured the Turkish battleship Messudijeh early in February. He succeeded in escaping in the same way. In the same waters the exploit of E14 (Lieutenant Commander E. Courtney Boyle) in the sinking of the Turkish gunboats and a Turkish transport in the Dardanelles is notable.

But the most interesting work when submerged is the firing of the torpedoes. In the submarine the cap or shutter which forms the outboard closure for the tubes is protected by a heavy steel stem. The cap is hinged to rise upwards by mechanism within the ship. The breech block is rotated and swung to right or left, the torpedo being supported while being run into the tube on tackle overhead. The breech is closed, and then the torpedo is discharged by the captain in the central control station at the required moment by compressed air. As soon as the torpedo has left the tube, water rushes into it and compensates for any loss of weight at the bow which might affect the trim of the boat. The cap is closed, by turning one or other lever at the top, and the water is forced by air into compensating tanks until the tube is quite empty. The next torpedo is then loaded into the tube.

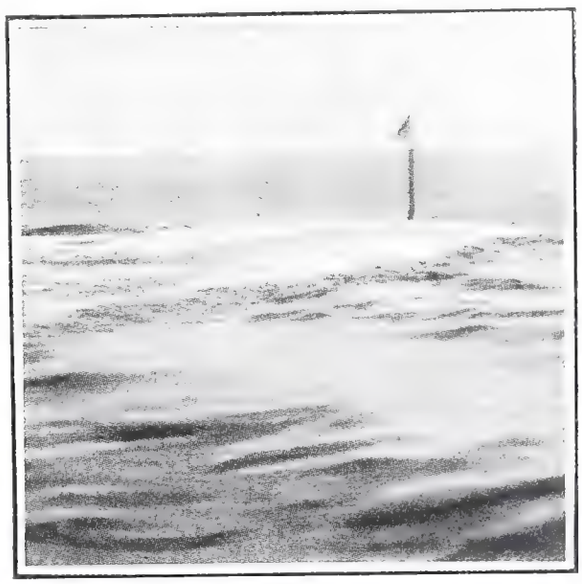
The later German submarines have a radius of action of close upon 2,000 miles at 16 to 18



Second stage: Angle 1¼ degrees.

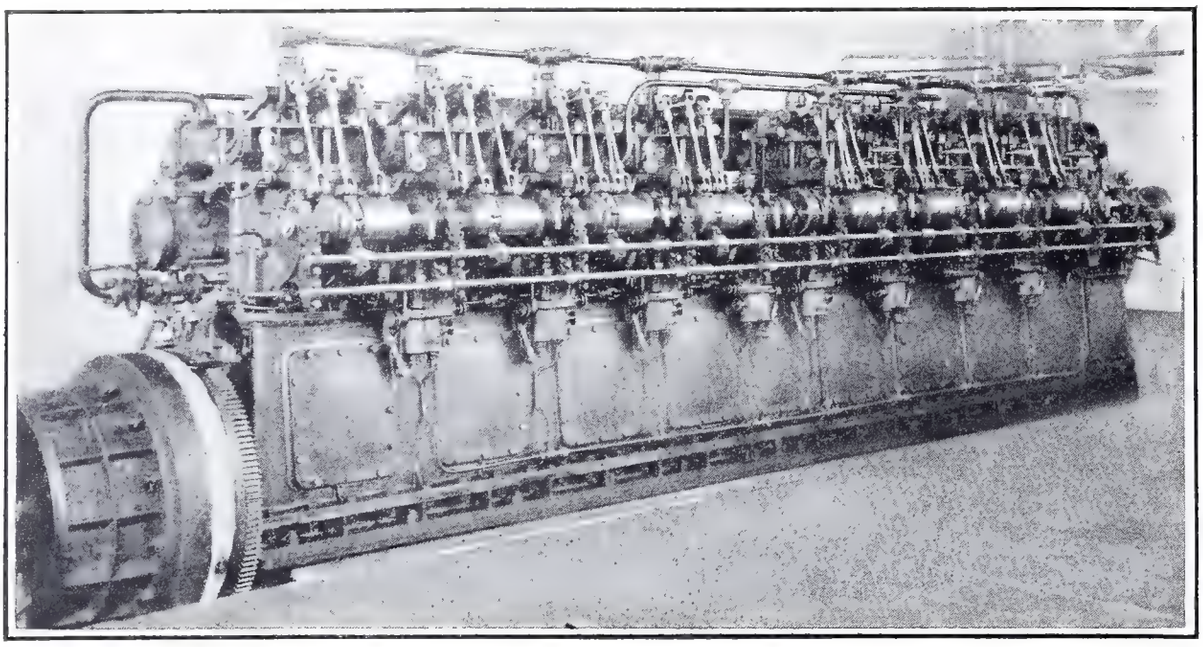
Fourth stage: Angle 1¾ degrees.

STAGES IN DIVING



Running submerged.
(*By courtesy of "Engineering"*)

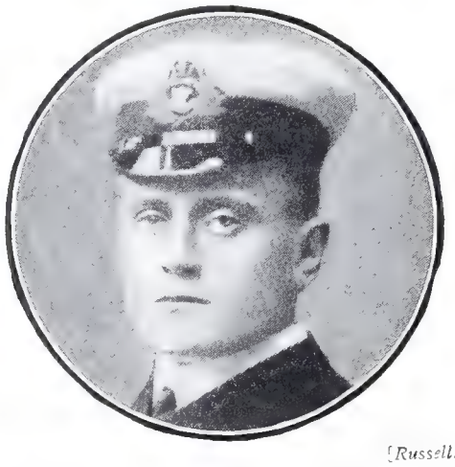
knots speed. But the tactics of the submarine rarely demand this radius at this speed, because if danger besets them they have only to disappear to a sufficient depth in order to elude the enemy, at all events for the time being. Consequently their cruising is probably done at a low speed, and some of the vessels are quite capable of doing 4,000 or 5,000 miles at such low speeds. Moreover, the nominal radius of action can be increased if, as is probable, the ships leave their base in the awash condition, showing only their conning towers. This is an advantage from the point of view of invisibility and safety, and is, further, conducive to rapid disappearance under the surface. In such condition their ballast tanks require to be partially filled, and when operations are to be carried out in waters distant from the German base, there is no reason why fuel oil should not be used in these ballast compartments instead of water, the fuel oil for the first part of a prolonged cruise being pumped from these tanks for use in the engine. When the oil in such tanks has been used, water can be pumped in to ensure the required degree of immersion. The vessel, having reached her station, to await the passage of her prey, need use little fuel oil, as she may remain in any condition, with the deck above water, or in the awash state in a stationary position, or with only a sufficient way on to ensure rapid submergence if on the surface, while if submerged she need only keep way on to make the diving rudder overcome the influences of the reserve of



ON BOARD A FRENCH SUBMARINE.
A petrol motor of 360 horse-power.

buoyancy. The electric storage batteries in the later ships are supposed to give a radius submerged of about 100 miles at 4 knots, which would be quite sufficient to enable the boat to get out of the visible range of attack by torpedo-boat destroyers or other craft. But, when convenient, the main propelling Diesel engines are used to re-charge the storage batteries by the working of the motor generator.

In the case of all German boats, particularly those of the earlier and smaller class, the effective radius down the Channel was increased by the capture in November of Zeebrugge, which was subsequently used as a base. A glance at the map will show that Zeebrugge is much nearer the track of ships in the Channel than the bases within Heligoland. Calais would be still more effective.



[Russell.

LIEUT.-COM. M. E. NASMITH ("E11").

CHAPTER LXVIII.

SIR JOHN FRENCH.

THE DISPATCH OF THE BRITISH EXPEDITIONARY FORCE TO FRANCE—SIR JOHN FRENCH'S APPOINTMENT AS COMMANDER-IN-CHIEF—HIS EXPERIENCE AND PUBLIC REPUTATION—HIS SENSE OF THE GERMAN PERIL—THE ULSTER CRISIS—SIR JOHN FRENCH AND THE CURRAGH RESIGNATIONS—SIR JOHN FRENCH'S EARLY LIFE—FOUR YEARS IN THE NAVY—LEAVES THE NAVY AND JOINS THE ARMY—LIFE IN THE BRITISH CAVALRY—SERVICE IN EGYPT—THE NILE EXPEDITION—BATTLE OF ABU KLEA—SERVICE IN INDIA—RETURN TO ENGLAND—OFFICE WORK IN LONDON—BRIGADIER AT CANTERBURY—SIR JOHN FRENCH AS AN AUTHORITY ON CAVALRY—THE SOUTH AFRICAN WAR—BATTLE OF ELANDSLAAGTE—THE COLESBERG OPERATIONS—RELIEF OF KIMBERLEY—OCCUPATION OF BLOEMFONTEIN—OPERATIONS IN CAPE COLONY—RETURN TO WORK IN ENGLAND—SIR JOHN FRENCH IN COMMAND AT ALDERSHOT—HIS PART IN THE HALDANE REFORMS—APPOINTMENT AS INSPECTOR-GENERAL OF THE FORCES—THE YEARS BEFORE THE GREAT WAR—SIR JOHN FRENCH IN FRANCE—HIS CHARACTER—LIFE AT THE BRITISH HEADQUARTERS—THE PRINCE OF WALES ON THE STAFF.

THERE could be no finer tribute to the character and ability of the man who in the outcome was destined to hold the supreme command over the greatest Army which Britain ever put into the field than the unanimity wherewith Government and public opinion in England selected Sir John French to be Commander-in-Chief of the British Expeditionary Force which sailed for the Continent in the third week of August, 1914.

The least military nation in Europe, we were called upon to produce, at a moment's notice, a General of European standing. He must be the equal of the highly trained leaders of our Allies; he must show himself the superior of the finest products of the Potsdam School. The responsibility attaching to the choice of the British leader was very great. We stood on the brink of a struggle which, even to the most optimistic, appeared long and arduous. Before the vast undertaking confronting us our last wars shrank into insignificant proportions. Our last great European Expedition, that sent out to the Crimea sixty years before, assumed the dimensions of a punitive force. Indeed, the blunders of that grim adventure were present in the minds of all: the dilatoriness of our Generals, their tactlessness in their dealings with our French Allies, the gross inefficiency of the Army administration.

There was not a moment's hesitation about the appointment of Sir John French. There was no painful canvassing of candidates, no

acrimonious discussion in the Press, no odious comparison of the merits of respective generals, no hint of favouritism, of party intrigue. Government, Army, people, found themselves without debate unanimous in their choice.

French had never been a popular idol save for a brief spell during the South African War. In this world-war—most businesslike of wars, as far as absence of display is concerned—he went off to the Continent to assume command of the Expeditionary Force by the boat-train from Charing Cross like any other traveller.

[*Lambert Weston.*

GENERAL FRENCH.
From a portrait taken just before the Boer War.

If a formal send-off had been arranged it would have been cordial, certainly ; it would hardly have been a tremendous public demonstration. For John French was little known to the crowd, save as a name. Since the distressing political crisis of March, 1914, which led to his resignation from the post of Chief of the Imperial General Staff, he had lived in retirement altogether away from the public eye.

But his name spelt efficiency. It inspired confidence. England remembered the man whose sudden emerging into brilliance had been the sole relief in the black days which marked the opening period of the South African War. Lamentably ignorant as the British public was of its Army and its leaders, the people seemingly divined that the trimly built cavalry leader incorporated the highly scientific training of the modern General, that within him lay a vast store of military learning accumulated during long years of steady application to his profession.

As Lord Haldane publicly testified in a speech delivered on March 20, 1915, Sir John French had been studying the possibilities of a conflict for five years or more. The Lord Chancellor admitted that Sir John's interest had been that he might have to command the Expeditionary Force, and with this in mind he had given the closest study to the possibilities of the future. Even before the violent international crisis precipitated by Germany's action in sending the Panther to Agadir had foreshadowed the world-war of 1914, Sir John French had prepared himself for the Franco-German conflict in which he knew Great Britain must be involved. Particularly did he familiarize himself with Belgium, where he knew that the inevitable struggle would be contested, just as Marshal von Hindenburg spent years of his life in studying the bare plains and lonely swamps of Poland to which his name will for ever be attached. Always a believer in following out on the ground the lessons taught in the military text and history books, Sir John had made annual pilgrimages to Belgium for a number of years in succession, accompanied by one or two of his staff, visiting the battlefields of Marlborough's and Napoleon's campaigns, but always studying the ground with an eye to a possibility which he knew could not long be delayed. Among the Field-Marshal's friends the name of " The Travelling Party " was given to him and his companions on these tours.

At a crucial moment of his life his keen perception of the ever-present German danger had led Sir John French to take a step which at the time was much discussed and little understood. He countersigned a guarantee given by Colonel (afterwards Brigadier-General) Seely, the then Secretary of State for War, to General Hubert Gough, commanding the Cavalry Brigade at the Curragh, to the effect that the Government had no intention of using the armed forces of the Crown to crush political opposition to the policy or principles of the Home Rule Bill. The guarantee was the outcome of wholesale resignations among the officers of the Curragh Cavalry Brigade, who had been given the choice of acquiescing in the military coercion of Ulster [to accept the Home

SIR JOHN FRENCH IN ENGLAND.
At the inspection of the Officers Training Corps of Christ's Hospital School, Horsham, March 25. On the General's left is the Rev. A. W. Upcott, D.D., the headmaster.

wishes of his own people, he was acclaimed with frenzied enthusiasm by the French, who seized the opportunity of the brief visit he paid to Paris before proceeding to the Front to give vent to the feelings of pent-up relief from the strain under which they had laboured during those fateful days when the whole world awaited England's decision.

The future was big with events of world-shaking importance. The moment claimed the man. Of a truth, none was more fitted, by character, by personality, and by the record of his career, to assume the immense responsibility of conducting our land operations against a powerful and dangerous foe.

There had been those in his life who called him "Lucky French." In reality, all the luck that had come his way was of his own seeking. He had left nothing to chance. He had always wooed Fortune. He had laboured all through his life to fit himself for the great opportunity he was determined to seize as soon as it presented itself. Many of his friends imagined that the Boer War would have been the apotheosis of his fighting career. They were wrong. Only John French knew it, however. With that strange strain of intuition which he inherited from his Irish ancestry he seemingly divined that Fate was reserving for him a sterner, a greater task than the circumventing of a tough band of skilful mounted peasantry. So that when peace had been signed in South Africa, and a grateful country had conferred high honours and public grants on Lord Roberts and Lord Kitchener, John French went back with a knighthood to the old military grind, ready for the long, stern task which even then he dimly discerned to be before him. His duty was to fit himself, to fit the British Army, for the inevitable clash of arms in Europe, to give our forces, recruited rather haphazard on our haphazard voluntary system, a training similar and equal to the highly perfected conscript armies of the Continent.

His life was a record of hard work. Though he came of a fighting stock, his was not a family of soldiers. He had neither great influence nor great riches to help him on in his profession. In fact, it might be said that, right up to the South African War, his career was not more distinguished than that of any other keen and interested Army officer. He was not looking for fame: he was not looking for promotion. He was looking for efficiency. He meant to make himself the best soldier in England, commanding the best Army that England had ever had. All his life he had waited for opportunities to come to him; only the opportunities that came were opportunities he had created

TWO FIELD-MARSHALS.
The late Lord Roberts, who died in France November 14, 1914, and Sir John French.

by sheer merit based on solid hard work. All his life he built himself castles in the air—but before he went to live in them he laid the foundations.

The blood of England, Scotland and Ireland mingled in his veins. He came of an ancient Irish line, the Frenches of Galway and Roscommon, and was fifth in descent from John French, M.P., of French Park, Roscommon, who fought in the army of William III. and commanded a troop of Enniskillen Dragoons at Aughrim in 1689. The Frenches are one of the most ancient families in Ireland, one of the "Tribes" of Galway, like the Skerretts and the O'Gormans, and still flourish, with both Roman Catholic and Protestant branches in different parts of Ireland. Lord de Freyne, of French Park, Roscommon, is the head of the family.

tenacity of purpose; while the English environment in which two generations of his family had lived gave him solidity and balance and that sound business sense which always seemed to his intimates to contrast so strongly with his passionate Irish qualities.

Sir John French was born at Ripple Vale on September 28, 1852. The year before, Lord Kitchener, with whom he was destined to be so closely associated at different periods of his life, had first seen the light of day at Tralee, and the same year that gave John French to the world witnessed the birth of General Joffre in the Dordogne.

There was nothing about the boyhood of the high-spirited lad, tenderly brought up by his sisters, to suggest that his was to be a military career. His father had destined him for the

SIR JOHN FRENCH'S BIRTHPLACE AND RESIDENCE.

Ripple Vale, near Deal. Manor House, Waltham Cross.

Sir John French's grandfather left Co. Roscommon early in the nineteenth century and settled down in Kent on the beautiful little estate of Ripple Vale, near Walmer, where the Commander-in-Chief of the British Army in the Great War was destined to see the light.

Sir John French never knew his father, Captain John French, R.N., who, having retired from the Navy with the rank of Post Captain, died when Sir John, his only son, was two years old, and left him and five sisters to the care of their mother, a Scottish lady, a Miss Eccles, from the neighbourhood of Glasgow. Thus the boy was a blend of Irish, Scottish and English stock, and the characteristics of the three races, the finest fighting peoples in the world, were strongly marked in his personality. From his ancient Irish lineage he derived his quick intelligence, his hot temper, his great intuitive faculty, his high courage, his optimism; from his Scottish mother a dash of the fighting quality of her people and probably his grim

sea. Most of young Jack French's boyhood was spent in North London, where his mother had a house after the family had removed from Ripple Vale. Those who knew him as a boy speak of him as a strikingly handsome lad, full of spirits and remarkably self-possessed. For a time he had a governess, but was eventually sent to a preparatory school at Harrow with a view to entering Harrow School.

Harrow left but a fleeting impression on Sir John French's mind. He was there for only a brief period. He was soon moved to Eastman's School at Portsmouth to prepare for the Navy.

The boy had no special vocation for the profession. It was the family choice. In addition to his father, two great-grand-uncles had served with distinction in the Royal Navy and had risen to the rank of Admiral. In his fifteenth year—in 1867—he entered the famous old training ship the Britannia. After a short stage he passed out into the Navy as midship-

FIELD-MARSHAL SIR JOHN D. P. FRENCH, G.C.B., G.C.V.O., K.C.M.G.

(From the painting by J. St. Helier Lander.)

man, and a most attractive cadet he was, according to friends of his family, with very fair hair and a merry face with grey-blue eyes. His first ship was the frigate Bristol.

Sir John French spent four years in the senior service. The Navy of those days, before the era of steam had fully set in, was a very different school from the highly trained, scientific service into which the Fleet had developed when Sir John Jellicoe was guiding on the sea the destinies which Sir John French controlled on land. But Sir John French never regretted the experience. In after years he always spoke gratefully of the value of his four years at sea in showing him something of the world at an impressionable age and in teaching him self-reliance. His longest cruise was in the Warrior, which, accompanied by the Black Prince and the Terrible, escorted the floating dock to Bermuda—rather a sensational performance for those days.

Even in his boyhood, however, the Army was calling him. In after life he seldom referred to his naval days. One of his most intimate friends who was with him in South Africa and through the Great War and who spent many a pleasant holiday visiting the European battlefields with the Field-Marshal relates that once, in the course of a trip over Sir John Moore's battlefields in Spain, they landed at Corunna. "I haven't been here since I was a midshipman," was Sir John's remark on landing. It was the first time, his friend says, that he had ever spoken to him of his service in the Navy.

"I learnt most from being in charge of boats when I was at sea," the Field-Marshal said when going over in his mind incidents of his early life. "As a midshipman I was first put in charge of a jolly-boat, then of a cutter, and lastly of a steam-launch. There is a good deal of responsibility attaching to the handling of a boat and it did me good as a youngster and taught me the habit of self-reliance, a habit I have tried to cultivate all my life. It is, indeed, the one quality that everybody ought to cultivate."

It was primarily a love of horses that attracted Sir John French to the Army. He was not unhappy in the Navy, but it was not the profession he would have chosen for himself. He admitted once that his ambition to make his mark as a soldier had not been stirred at this early stage of his career. It was the love of the open air, of hunting, and all field sports connected with horses, that drew him away from the sea.

The young officer—he was only 18—consulted an old friend of his father's and decided to make the change which was destined to alter the whole course of his life. At the age of 19 he entered the Militia. Like Napoleon, the military leader for whom he entertained the greatest admiration, he began with the artillery, spending two years—from 1871 to 1873—with the Garrison Artillery at Ipswich. Then, at the age of 21, he passed into the Army, being first gazetted to the 8th Hussars, with whom he stayed only a very short stage, being transferred after a few weeks to the 19th, the regiment with which his name will be connected for all time.

Life in the British Cavalry in those days of pillbox caps was vastly different from the strenuous existence of the cavalry officer in the era introduced by Sir John French. Sir John French confessed to the writer on one occasion that the idea of the cavalry subaltern was to get away from work as much as possible. There were two parades a week—the Commanding Officer's parade, at which all the officers had to be present, and the Adjutant's Parade, which only subalterns junior to the Adjutant were obliged to attend—and they mostly stayed away. Polo, hunting, steeplechasing were the order of the day, and young Jack French entered into them with the zest, recklessness and dash which lurk in the breast of every true Irishman.

Aldershot was his first garrison. Then he went to Ireland. Layford, Limerick, Cork, knew him in turn. He was wont to dwell with pleasure in after years on those happy days in "the finest hunting country in the world." He rode in steeplechases, he hunted, he proved himself a first-class whip on the box of a four-in-hand, and he did a great deal of shooting, mainly woodcock.

An idle life, it would seem on the surface. But beneath the captivating exterior of the dashing young subaltern lay a studious nature which, with all the hunting and steeplechasing and adventures of the road, was already conscious of the call to greater things. John French was even then grounding himself in the rudiments of his profession as taught by the great military writers. To get time for reading he would snatch hours from sleep, before a long day with the hounds or the guns.

All his life he was accustomed to read. In the authors of his choice he was better read

across the desert by way of Metammeh to reach Khartum, which was then surrounded by the Mahdi's dervishes. Part of the 19th Hussars under Colonel Barrow, with Major French as the second in command, were attached to the column for scouting work. Colonel Barrow was a remarkably fine soldier, and, besides doing wonders for the regiment, exercised a profound influence on John French. Under Barrow the 19th developed splendid dash and resourcefulness in the reconnaissance work they did for the little column as it pursued its slow and painful path across the desert. Korti was left on December 30, and by the middle of January the force was in touch with the enemy at Abu Klea. On January 16 the Hussars, whose mission it was to hover for ever on the flanks of the little force and head off the enemy from making a sudden dash, reported the dervishes in strength between the British camp and the wells. Stewart knew that he had to reach the wells, and unhesitatingly advanced, his troops formed into a square.

The enemy attacked with the fearful violence of the fanatic who believes that death at the hand of the infidel secures him eternal bliss. The square broke more than once before the irresistible onrush, but the British force managed to hold firm all through the afternoon, until the guns were able to put the Mahdi's legions to flight. The cavalry pursued them across the desert and captured the wells, and the next day the column pushed on again on its errand of mercy towards the beleaguered city, on which the eyes of an entire nation were fixed.

At Abu Klea French was not in the square. He and the rest of the cavalry were on the outside hovering about waiting for their opportunity to pounce on the foe. Hardly had the advance on Metammeh been resumed, than again the enemy was discovered in force. The men were exhausted, and particularly the cavalry horses were absolutely "cooked." The Hussars were put in a zareeba, while the rest of the force, forming square again, once more awaited one of those fearful dervish rushes. It broke on the British square with terrific losses. Our casualties were trifling, but we lost the gallant Stewart, who sustained wounds from which he died a few days later.

It was near Metammeh that the awful blow fell on the little force, the news that Khartum had fallen, that Gordon was dead, and their mission in vain. John French was actually the first man in the force to hear the tidings. He was watering his horses in the Nile when, hearing the sound of a boat, he looked up and saw a white man paddling towards him. It was Stuart Wortley, who had been sent with the friendlies to reconnoitre as far as Khartum, and had acquitted himself with extraordinary gallantry of his hazardous task. Sir John French used to say that that meeting with Stuart Wortley was one of the most extraordinary experiences of his life. It was from Stuart Wortley's lips that he learned with deep emotion of the fall of Khartum and the murder of Gordon.

From that moment the object of the expedition was gone. It now became a question of how it could be withdrawn without falling a victim to the hordes of dervishes hastening down from Khartum. Sir Redvers Buller was in command, and skilfully led the retreat. Sir Evelyn Wood, sent out from Korti with reinforcements, gave Mr. Cecil Chisholm, author of a biography of Sir John French, an account of his first meeting with French. "I saw him," Sir Evelyn Wood relates, "when our people were coming back across the desert after our failure, the whole force depressed by the death of Gordon. I came on him about a hundred miles from the river—the last man of the last section of the rearguard!"

His good work on the retreat from Abu Klea brought French his first Mention in Dispatches. Buller wrote about him: "I wish expressly to remark on the excellent work that has been done by a small detachment of the 19th Hussars both during our occupation at Abu Klea and during our retirement. And it is not too much to say that the force owes much to Major French and his thirteen troopers."

As has been said, Sir John French was made Lieutenant-Colonel in Egypt. On his return to England, five years of garrison routine followed, during which Lieut.-Colonel French, now second in command of his regiment, threw himself wholeheartedly into the training of his men. He introduced the squadron system and took infinite pains with testing new theories of instruction. It was about this time that he began to attract attention by the admirable work he was doing.

French was wont to say there is no time so happy in a soldier's career as when he is Colonel of his regiment, because it enables him to take a personal interest in his men individually. The young Colonel of the 19th—he was only

in the early thirties—showed the width of his human understanding for that most contradictory of creatures, the British soldier. Serious-minded as he always was, he sought to elevate the soldier at a time when the bad old prejudice against the redcoat still flourished in many circles in England.

In 1891 came service in India, opening up further chances of cultivating that self-reliance which, as we have seen, was always an ideal of John French. He took the 19th out to India as their Colonel, being stationed first at Secunderabad and afterwards at Bangalore. He made several trips to the North for manœuvres. He divided his time between hard work and polo. In 1893 he returned to England.

John French had now reached a critical point in his career. Was he to remain a Colonel all his life, retiring after years of fruitless grind in dull garrisons, perhaps with the rank of Brigadier ? Had he reached what they call in the German Army *die Majorsecke*, that cape in the military career that is so difficult to negotiate ? The fact remains that shortly after his return from India in 1893 Colonel French went on half-pay.

But he did not vegetate. His intense mental energy, his irrepressible vitality, never let him rest all through his life. He continued to read up his profession, and notably played a useful part during the cavalry manœuvres in Berkshire in 1894. It was the Cavalry Drill-Book that won back to the Army the man who was destined to become Field-Marshal and our Commander-in-Chief in the Great War. The cavalry was to be reorganized and a revised drill-book was essential. In the opinion of Sir George Luck, Sir John's old chief in India, who was entrusted with the work of reorganization, no man was more capable of compiling the book than John French.

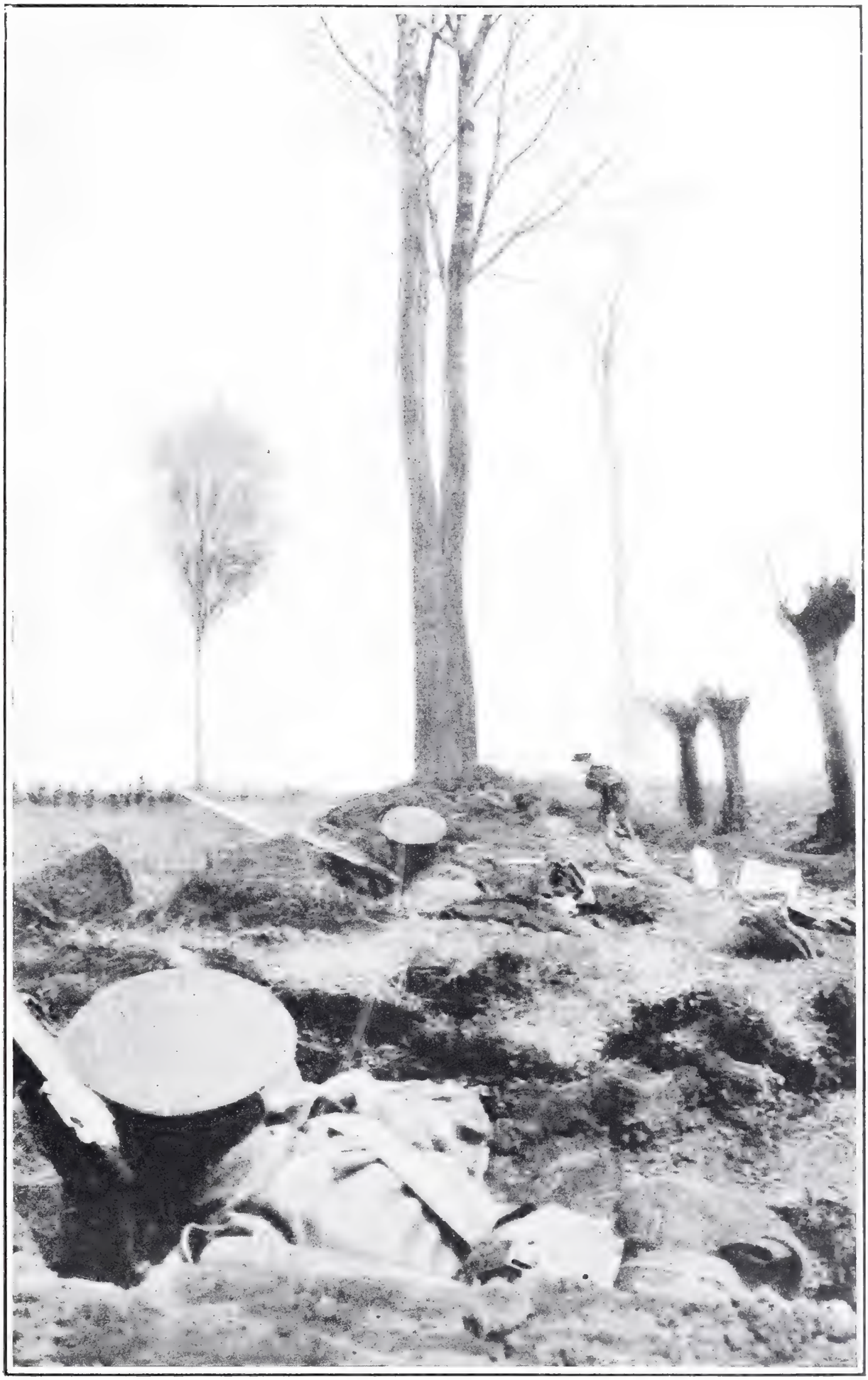
John French was back again in harness. 1895 found him installed at the old War Office in Pall Mall as Deputy Adjutant-General to Sir Redvers Buller, the Adjutant-General, getting insight into the administration of the Army, a department that was to play a great part in his subsequent campaigns.

All this time, in Egypt, in India, during his two years in retirement, at the War Office, he was slowly but surely qualifying himself as our leading cavalry general, and in 1897 he was given command of the 2nd Cavalry Brigade at Canterbury.

It was not long before his revolutionary ideas on the functions of cavalry brought him into violent conflict with his superiors. He took an eminently sane view of the rôle of cavalry in war, believing that the "cavalry spirit," of which we hear so much in Continental armies, suffers not at all from the men receiving a training which teaches them to fight also on foot. "As regards the British Cavalry," he wrote in his preface to General von Bernhardi's "Cavalry in Future Wars," "I am absolutely convinced that the cavalry spirit is and may be encouraged to the utmost without in the least degree prejudicing either training in dismounted duties or the acquirement of such tactical knowledge on the part of leaders as will enable them to discern when and where to resort to dismounted methods. How, I ask, can cavalry perform its rôle in war until the enemy's cavalry is defeated and paralysed ? . . . Cavalry soldiers must, of course, learn to be expert rifle shots, but the attainment of this desirable object will be brought no nearer by ignoring the horse, the sword or the lance. On the contrary, the *élan* and dash which perfection in cavalry manœuvres imparts to large bodies of horsemen will be of inestimable value in their employment as mounted riflemen when the field is laid open to their enterprise in this rôle by the defeat of the hostile cavalry."

Sir John French held that cavalry had a threefold rôle—namely, to reconnoitre, to deceive, and to support. He frankly admitted, with regard to the first of these functions, that in modern war the aeroplane had taken the place of the cavalry for reconnaissance work. It speaks highly for Sir John French's intensely adaptable mind that under him the Air Wing of the Army developed until in the Great War our Flying Corps became undoubtedly the most effective of its kind of all the armies in the field. In the rôle of deception, he pointed out, the cavalry must mislead the enemy as to where the main strength lies, and also as to the real point of attack.

The new Brigadier at Canterbury, therefore, set himself the task of combining in the British cavalry the functions of cavalry as already understood and accepted and of mounted infantry as he had already successfully tested it in Egypt. Tremendously independent in character, Sir John French never boggled at taking risks with the cavalry, and more than once his enterprise in this direction at manœuvres, even though crowned with success,



GERMANS CHARGING THE BRITISH NEAR YPRES.

The King's Liverpools in their trenches waiting for the Germans (on the left), who are advancing in close formation towards the British trenches.

called down upon his head the thunderbolts of the umpires. His justification, however, was to come later. The history of warfare has seen few feats more daring than French's famous rush at the head of the cavalry to the relief of Kimberley. His bold initiative on that occasion was crowned with complete success, and set the hall-mark of great military talent on his work in South Africa. Despite the convincing success of his theories in South Africa, Sir John French, who is essentially a well-balanced man, stoutly declined to be inducted into erroneous ideas as to the rôle of cavalry in other wars. "All wars are abnormal," he was wont to declare. For himself, he was content to mould his tactics on the situation as it presented itself to him, but to apply to every occasion the experience he had already gleaned from active service in the field and from his books.

A year at Canterbury and then promotion to the rank of Major-General to command the First Cavalry Brigade at Aldershot gave Sir John French a free hand to develop his own theories about cavalry training. The time was approaching when he was to burst with meteoric brilliance upon the world at large as England's main hope in South Africa. The secret of his success lay in his great independence of thought and his adaptability of temperament, which enabled him to realize more quickly than the obtuse military authorities at home that fighting in this land of vast distances, of rolling, boulder-strewn plains and innumerable barren hills against a mobile and resourceful enemy was not the warfare of the text-book and manœuvre-ground. His long years of patient study brought their reward: his maxim of "reading little and thinking much" proved its value. On his triumphant return from South Africa the *Times* war correspondent wrote of him:—

> It was not on the manœuvre-grounds of Europe and India, it was not on the successful field of Elandslaagte, or the disastrous morning of October 30, 1899, that French learned the lessons of modern war. But it was during the months of activity in facing Schoeman, Delarey and de Wet in turn before Colesberg that he acquired the art of South African warfare and the value of time and dash and calculated audacity in war. . . . His career has been one long series of successes and he has proved himself to possess those peculiar faculties in the field which are essential for the successful handling of cavalry and which have been found in no other cavalry officer of senior rank in this war. In action he has proved self-reliant, resourceful and determined: possessed of an instantaneous grasp—almost intuitive perception—of the right course to pursue, even in the most complicated circumstances and unexpected *dénouements*. Unperturbed by success or danger, far-sighted and, what is more valuable, clear-minded, he has never been known to compromise his subordinates even in the most delicate situations. . . . He returns to England to be welcomed as the most loved and most successful of the direct commanders in the field who have fought the nation's battles in the recent struggle on the South African veld.

The warmth of this fine tribute is the measure of the nation's relief at the appearance of a man who was able, to a great extent, to make good the lamentable miscalculations of the Government with regard to the Boers' strength. Though the danger of war was acute for months before President Kruger's ultimatum brought matters to a head, not even the most elementary preparations for war had been made. We had no surveys even of the districts obviously marked out for invasion: we had no maps. We were wholly misinformed as to the strength of the Boers: we allowed ourselves to be deluded into the easy expectation that the enemy would be swiftly reduced to impotence by the mere display of England's might. The people in Natal and the Cape Colony knew the real danger of the situation. Their repeated and earnest warnings were met by the despatch of a few troops to South Africa from the Mediterranean, from India, and from Egypt. They only reached their destination a few days before the outbreak of war.

We were utterly at the mercy of the enemy. In Natal, where Sir George White from Gibraltar was in command, there were four cavalry regiments, eleven battalions of infantry, and six batteries of field artillery, with a mountain battery and about 2,000 irregular horse raised in the Colony. In Cape Colony only a handful of troops guarded the long frontier of the Transvaal; there was half a battalion of infantry at Kimberley; we were short of modern artillery; we were wholly unprepared. For the first few months of the war the Cape Colony lay at the mercy of the enemy if the Boers had possessed the energy to sweep down to the south, leaving a small force to hold General White in Natal.

After some hesitation, John French was given command of the cavalry in Natal. It is characteristic of the general incompetence of the military authorities that there was some opposition on the part of certain senior officers to the appointment, on the grounds of John French's "inefficiency to command in the field." This was an echo of the opposition to his revolutionary ideas on the usage of cavalry. However that may be, the objectors were, happily, overruled, and French landed in South

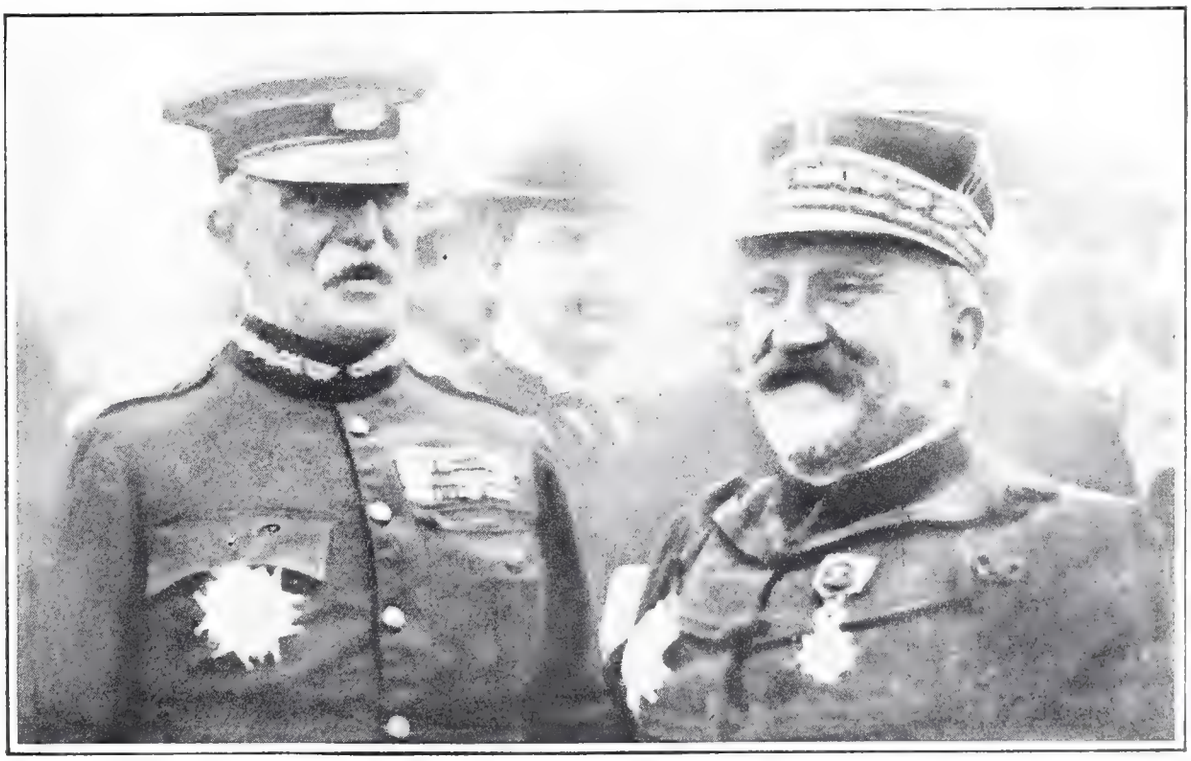
graph news of his appointment to command the cavalry in the army of Sir Redvers Buller, who had just arrived at Cape Town to assume the supreme command.

French persuaded the station-master to send him down the line to Pietermaritzburg. It was the last train to get down to the south through the cordon of Boers drawing round Ladysmith. His escape was a piece of providential good luck destined to prove of incalculable advantage to our arms in South Africa.

The outlook confronting Sir Redvers Buller on his arrival, with a tremendous reputation, to take charge of the operations in South Africa was disquieting in the extreme. Kimberley was clamouring for help: the Cape Colony was already invaded and in imminent danger of being overrun by commandos already concentrating at Norval's Point and Colesberg. General French, who went straight to Cape Town, found his Chief resolved that the safety of Natal and of Sir George White's force invested in Ladysmith was the first consideration. Lord Methuen's Division was going to the relief of Kimberley, General Gatacre was proceeding towards Stormberg to guard the eastern districts, while to French was assigned the command of the troops detailed to hold the country between the important railway junction of De Aar on the west and General Gatacre's Division on the east. His task was to protect the exposed flank of Methuen's communications in the Cape Colony from the Free State commandos, which, after violating the Cape Colony border, had concentrated and established themselves in strength at Colesberg.

The operations about Colesberg represented the grand achievement of John French's life up to the Great War. For three months, by judicious and skilful finesse, with a skeleton command spread out over a front of twenty miles, he was able to keep in check a force that was never less than three times as strong numerically as his own, and often four or five times as strong. By constant movement, sometimes by way of reconnaissance and sometimes by bluff, he so mystified his enemy that he reduced him to something like mental paralysis. It was at times a desperate expedient to keep up the character of the bluff, but it succeeded, and it trained French and his Staff in a manner which was not long in bearing good fruit as soon as the tide began to turn and the General was called upon to act otherwise than upon the defensive.

The Boers had occupied Colesberg on November 14, proclaiming the town as Free State territory. As the enemy was menacing the main line of railway from the north by threatening Philipstown from Colesberg, French decided to make Colesberg his first objective, with Naauwport as his base. His cavalry came



GENERAL FRENCH IN FRANCE.
The British Commander and a smiling French General.

SIR JOHN FRENCH ON A VISIT

within eight miles of Colesberg without sighting the enemy on a preliminary reconnaissance, and this decided French to attempt to seize the place. Endless reconnaissances, necessitated by the difficult country, the extreme mobility of the enemy, his own insufficient force and the guarding of the long lines of communications, occupied the first weeks of November and brought the little force as far as Arundel Station, whence French hoped to be able to seize the hills to the north of that place. But the enemy was found to be in force on these hills, and we were not able to occupy them until December 7, by which time they had been evacuated.

Establishing himself firmly at Arundel, French continued his harassing tactics against the enemy. His main idea was so to confuse and puzzle him that, whilst frustrating the Boer plans, he might quietly continue his own advance. So successfully did he realize his scheme that by the end of the month (and the end of the year) the Boers were everywhere falling back on Colesberg. In the early morning of December 30 French, whose custom it was to make daily reconnaissances in person, accompanied by some cavalry and artillery, found that Rensburg had been evacuated and that Colesberg was still in the hands of the enemy.

It was his next immediate objective. Surrounded by high kopjes affording abundant shelter to the enemy, its capture would only be possible by an actual display of force. Careful reconnaissance indicated a point five miles to the south-west of Colesberg, Maeder's Farm, as a suitable spot from which to deliver a night attack on two of the hills looking down on the place. The possession of these hills would jeopardize the enemy's line of retreat.

The attack was brilliantly carried out. The attacking column advanced in dead silence, even the baggage carts being dispensed with to avoid a betrayal of the movement through the creaking of their wheels. The first hill, subsequently known as McCracken's Hill, was rushed and taken.

The first part of the operations had been successfully realized, but subsequent progress was found to be impossible. As on so many other occasions in the South African War, which proved the triumph of the modern rifle, the Boers, well sheltered on the barren

TO FRANCE BEFORE THE WAR.

hill-tops, were able to allow the British to come quite close before opening a withering fire on them. There was nothing for it but to fall back, and though General Schoeman, the Boer leader, failed in an attempt to outflank our (Colonel Porter's) force, we were unable to realize further progress.

It was in this region that General French sustained practically the only reverse he encountered at the hands of the Boers. Desultory fighting and continued reconnaissances had shown that a kopje, known as Grassy Hill, which dominated the railway station of Colesberg, was the key of the situation, and that its capture would give us the town. The opportune arrival of reinforcements decided French to use his entire column for the attack on the hill. However, before the final dispositions for the attack had been made, word arrived from Colonel Watson, the commander of the Suffolk Regiment, to say that he had carefully reconnoitred Grassy Hill and that he was confident he could take it that night with four companies of his regiment.

The chance of seizing this important position without firing a shot apparently led the British Commander to give Watson a free hand, but he instructed him to keep him informed as to any operations he should undertake.

Half an hour after midnight Watson led his regiment forth, and noiselessly the crest of the hill was occupied. But in a few swift moments destruction fell on the expedition. It appeared that Watson had just called his officers together on the hill-top to explain his future movements, when a terrific fire was opened on them, killing the Colonel and three officers and twenty-three men and wounding and officer and twenty men. Six officers and 107 men were afterwards found to be missing. The latter body surrendered when they saw that further resistance was useless. Part of the regiment, on the orders of some one unknown, retired. What had happened was that Delarey had arrived on the scene the previous day, and had decided to occupy this very hill, sending forward 100 Johannesburg Police without supports for the purpose. If the Suffolks had held their ground and allowed our men time to come up Grassy Hill would probably have remained in our hands.

The quality of Sir John French's human understanding is finely illustrated by the speech he delivered months afterwards to the

THE BOER WAR: GENERAL FRENCH CUTS OFF ENEMY'S RETREAT, COLESBERG, JANUARY, 1900.

A most remarkable feat of the South African Campaign was the hauling of the 15-pounders to the summit of Coleskop, a height rising 800 feet above the plain, from which shells were continually dropped into the Boers in Colesberg.

Suffolk Regiment on meeting with them again.

"It has come to my knowledge," he said, "that there has been spread about an idea that that event (Grassy Hill) cast discredit of some sort upon this gallant regiment. I want you to banish any such thoughts from your minds as utterly untrue. You took part . . . in a night operation of extreme difficulty on a pitch-dark night and did all in your power to make it a success. . . . Such night operations can never be a certain success, and because they sometimes fail does not therefore bring discredit on those who attempted to carry them out. You must remember that, if we always waited for an opportunity of certain success, we should do nothing at all, and that in war, fighting a brave enemy, it is absolutely impossible to be always sure of success: all we can do is to try our very best to secure success—and that you did on the occasion I am speaking of."

Stout words such as these are calculated to put strength into the most doubting hearts.

French's force was now 4,500 strong, and by the third week of January it had been increased by 3,784 infantry. French continued to keep the Boers, now commanded by de Wet and Delarey, on the move. Major Butcher, R.F.A., executed the seemingly impossible feat of hauling a 15-pounder gun to the summit of the Coleskop, a sheer and almost inaccessible height rising 800 feet from the plain, from which shells were continually dropped into the Boers in Colesberg, keeping them constantly on the strain. But General French's everlasting reconnaissances showed that the Boers were receiving large reinforcements preparatory to taking the offensive.

In the meantime Lord Roberts had arrived and taken over the supreme command, with Lord Kitchener as Chief of Staff. General Kelly-Kenny was given command of Naauwport and the line south, while General French was left in command of the line north of Naauwport.

On January 15 the Boers attacked our advanced positions at Slingersfontein, but, after an initial success, met with a severe reverse and were driven back again. So the tide of victory ebbed and flowed. Watchful night and day, French showed himself always equal to the ruses and enterprises of the enemy. Dashing on occasion, as a real cavalry leader should be, he was cautious as well, and on more than one occasion he showed a circumspection which was sadly lacking in others among our generals in South Africa. One such occasion was the affair at Plessis Poort. This was a defile through which the main road to Colesberg passed. The capture of the heights dominating the defile would cut off the enemy's main line of communications and his retreat. General French planned the main attack to take place on the Boers' right, but at the same time ordered their front and left to be assailed whilst our troops were working their way round at the back. All went well until the main attack had reached to within 1,500 yards of Plessis Poort. The Wiltshires were sent forward in extended order across the plain. The Colonel commanding the column asked for permission to drive the attack home, but the silence of the surrounding hills rendered French suspicious, and he ordered a retirement. Hardly had the Wiltshires turned round than the enemy opened a hot fire on them from the heights, but our men, thanks to the General's foresight, were able to fall back with very small casualties.

General French's work round Colesberg had now come to an end. On January 29 Lord Roberts summoned him to Cape Town and entrusted him with the responsible task of relieving Kimberley. Up to that time French had been the sole British General in South Africa who had made the Boers respect him. Upon him had devolved the enormous burden of keeping in check an enemy elated by their victories at Stormberg and Magersfontein and watched with sympathetic interest by practically every foreign Power in Europe. French's splendid tenacity, inexhaustible resource and undaunted optimism had served England well. By checking a Boer rush into the Cape Colony, not by weight of numbers, but by skilful manœuvring and bluff, he undoubtedly staved off further disasters, which, in the state of feeling then existing in Europe against Great Britain, would almost certainly have led to the formation of a powerful coalition against us.

Those who know how admirably the Intelligence of the British Army in the field worked under Sir John French in the Great War will not be surprised to know that a large measure of his success in the operations round Colesberg was due to his excellent system of signalling, his free use of scouting patrols, and, last but not least, to the personal reconnaissances he was wont to undertake almost daily. To the

general public Sir John French's success in the South African War was for ever identified with his great dash for Kimberley ; to military students, however, his greatest service to the Empire and his most valuable contribution to the history of strategy and tactics are undoubtedly the ten weeks' operations round Colesberg.

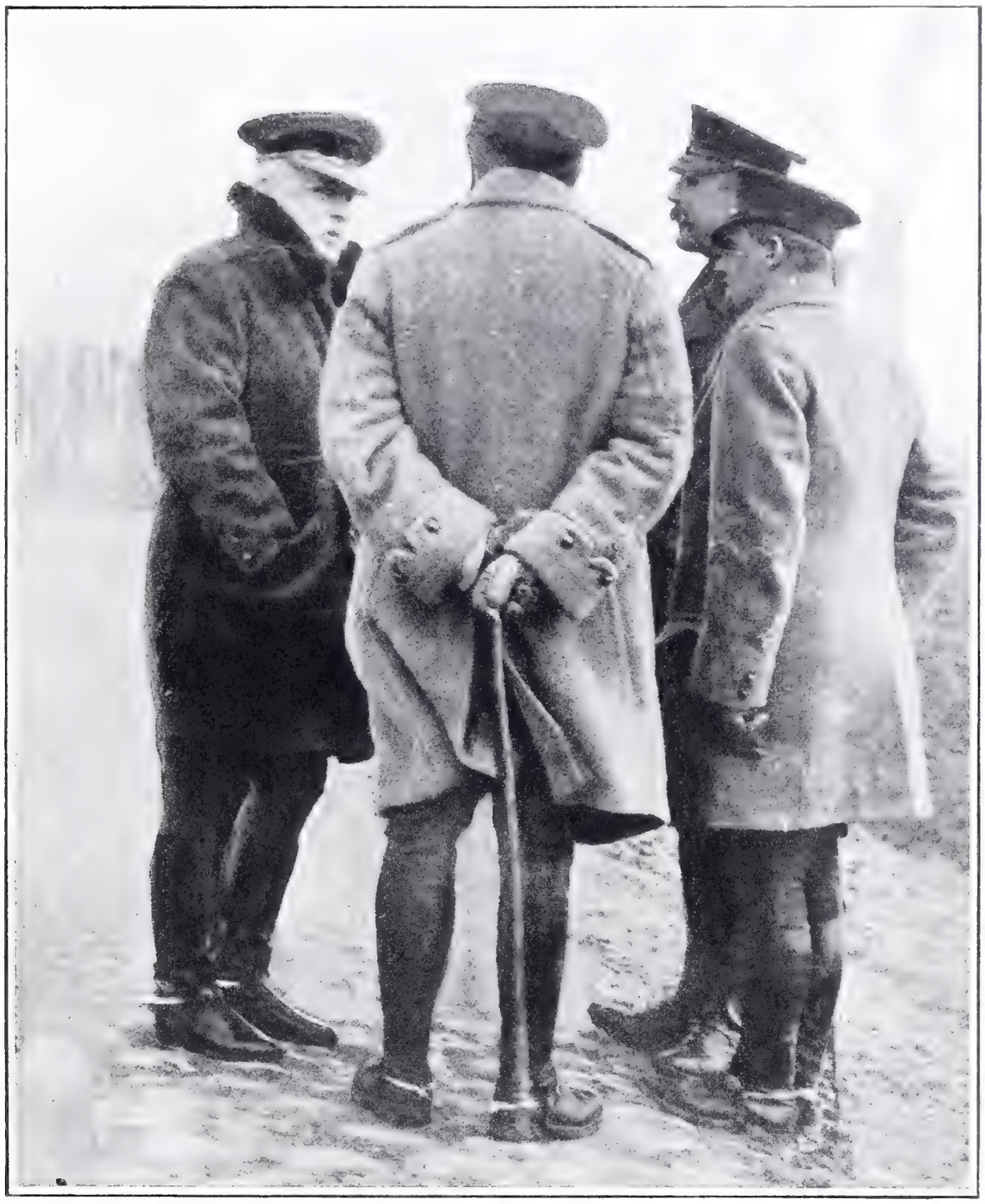
"I promise faithfully to relieve Kimberley at six on the evening of the 15th if I am alive." This was the solemn undertaking given by General French to Lord Kitchener at Modder River, and history shows how exactly, how brilliantly, he kept his word. Lord Roberts was planning the march on Bloemfontein and Pretoria, and had designated French to relieve Kimberley in order to clear his flank and protect his communications against Cronje, who, since his success at Magersfontein, had been held on the Modder River by Lord Methuen. To mislead the enemy, a demonstration was made as if to advance against Bloemfontein by way of Fauresmith, while by skilful handling it was found possible to withdraw a considerable part of the force designated for the relief of Kimberley from the Colesberg area without the Boers being any the wiser.

General French's cavalry division consisted of three brigades and a division of mounted infantry in two brigades, "the largest mounted British division that had ever worked together," as Lord Roberts said in his address to the force before it started. "You must relieve Kimberley if it costs you half your forces," was the veteran leader's parting injunction to General French, and it was with these words ringing in his ears that he set out over the moonlit veld at 3 a.m. on the morning of February 11.

French's cavalry division was still far from complete. Of the 8,500 men he had been promised, it had been found possible to concentrate only about 4,800 men with seven batteries of Horse Artillery at the camp on the Modder River. Facing him was Cronje, misled, perhaps, as to the British intentions, but with a force numerically superior to that of General French. The weather was tropical : the country arid and waterless. It was a prospect calculated to appal the stoutest heart.

Advantage was taken of the early start to cover as much ground as possible before the heat of the day set in. At Ramdam, which was reached at 10 a.m., part of the force joined up with the main body, but the mounted infantry did not catch up the division until the 13th. On February 12 the force crossed the Riet River by a clever ruse. It was originally intended to cross the stream at Waterval Drift, but French, knowing that the Boers had a proclivity for taking cover in river-beds, ordered Colonel Gordon to cross the river at Waterval Drift if no Boers were encountered, otherwise to feign a crossing to the north. When our advance patrols approached the banks the Boers opened a heavy artillery fire from kopjes above the Drift, some shells falling unpleasantly near General French and his Staff. While our Horse Artillery set about the work of silencing the Boer guns here, Gordon, as ordered, feinted a crossing at Waterval Drift, whereupon the Boers withdrew to the right of the river to await the coming of the enemy. The trick had succeeded. Without losing a moment General French set off for De Kiel's Drift, as he had planned from the start, with the 1st Brigade, Roberts' Horse and the mounted infantry, and a ford having been discovered, managed to get across despite the high and slippery banks. The Boers discovered the ruse, and made a rush for De Kiel's Drift to dispute our crossing. They were too late.

The lack of water, coupled with the awful heat and stifling dust, was telling terribly on both men and horses. To prevent delay in the further advance, the transport was left behind on the other side of the river, and on the morning of the 13th the force started off again in a game attempt to reach the Modder River before nightfall. Klip Drift, on the Modder, was the goal, but on nearing it a large force of Boers was met with. The guns drove them off, but they clung to our right flank, compelling General French, as they thought, to change his direction towards Klipdraal Drift. This, however, was but another ruse on the part of the British commander. Hardly had the Boers swung away to check him at Klipdraal Drift, than French, changing direction once more, headed for the Klip and Roodewal Drifts as fast as the exhausted condition of his horses would permit him. "Five miles off," writes Major Goldman in his history of General French's work in South Africa, "a green fringe of bush, standing out in dark relief against the sun-scorched sand, told the wearied men of the water for which they and their thirsty horses had so eagerly panted. An hour later they were there, looking eagerly back on those numerous brown heaps, each a dead or ex-



"SOMEWHERE IN FRANCE."
Sir John French and some members of his Staff.

hausted horse, lying out along that wearisome desert waste, under the pitiless sun—all for the want of a little water."

The rapid change of movement surprised the Boers. Through the shimmering haze above the yellow Modder they were seen in hasty retreat. Colonel Gordon on the left and Colonel Broadwood on the right pursued them across the river, and the three Boer laagers, with supplies of all kinds, fell into our hands.

This was February 13. The passage of the Modder was ours. French had yet two days in which to realize the promise given to Lord Kitchener to relieve Kimberley by the 15th. Through the night of the 13th and until the afternoon of the 14th French remained by the river bank waiting for the baggage and the infantry to come up to enable him to push forward with the cavalry to his goal. We held the main line of the Boer retreat to Bloemfontein, and to have advanced before our supports had come up would have given Cronje a free line of retreat again. So French waited,

GENERAL FRENCH IN FRANCE.

The British Commander-in-Chief watches his troops marching off to the trenches.

with what patience those who know his mercurial temperament may imagine.

At 4 o'clock on the afternoon of the 14th the baggage arrived, and after nightfall the appearance of General Kelly-Kenny's infantry released the cavalry for the final stage of the great effort.

The cavalry went off at 9.30 in the morning, carrying supplies on the saddle and on led horses. Resolved to the last to conceal from the enemy his real intentions, General French still made as though bound for Bloemfontein. But, only a few miles out, the three brigades and the mounted infantry met with an unexpected check which threatened the failure of the whole enterprise. A hot fire coming from a low ridge betrayed the presence of Boers in force blocking the road to Bloemfontein, while the road to Kimberley was covered by the fire from their right and left positions, the one a ridge running from north to south, the other a hill, a plain two and a half miles wide between. The ridge was held by skirmishers; on the hill guns were posted.

It was a situation demanding just such a temperament as that of the stout little man in the sun-helmet who commanded the British forces. All military teaching urged retirement, though retreat would have proved disastrous for the whole of Lord Roberts's plan, in which the relief of Kimberley played so large a part. French's intuition, which enabled him to calculate better than any man in his command the exact ratio between the chances of success and failure in the daring enterprise which instantly occurred to his mind, served him well that day. He knew that the road to Kimberley lay open on the other side of the open plain before him, and a glance at the weary horses convinced him that to win his way through he must dare now or never. He dared—and he dared greatly. He decided to charge the enemy's main position.

The 9th and 16th Lancers, afterwards destined to cull immortal laurels at Mons and Ypres, were sent forward under Colonel Gordon, the guns remaining behind to keep the Boers in check. French, with Douglas Haig, his Chief of Staff, afterwards to be his lieutenant in the European war, placed himself right in the front of the charge. An eye-witness wrote of this memorable charge: "At a thundering gallop the leading brigade swept forward almost lost to view in a whirling cloud of dust, which rose still higher and thicker as Broadwood's brigade galloped after it, barely half a mile behind. In breathless suspense the rest of the British force watched the magnificent spectacle, dreading every moment to see the front line waver and fail under the stream of fire; but the long lines swept on unwaveringly, and only here and there could a fallen trooper or riderless horse be seen. The speed of the charge, the open order, the cloud of dust —all contributed to render the Boer fire ineffective. Before the irresistible wave of horsemen the Boers scattered and fled." An oil painting of this famous charge, showing French and Douglas Haig in the van hung in the dining-room of the Field-Marshal's town house.

Our casualties were astonishingly small, amounting to only four men wounded and two horses killed. The horses were now quite worn out, and could not even be watered at Abon's Dam, where the cavalry proceeded on re-forming after the charge, as the scanty spring only gave enough for the men and water-carts. An attempt made under the personal supervision of the General to get into heliographic communication with Kimberley from a ridge by the roadside failed, as the garrison apparently thought the signals came from the enemy. The Boers reappeared and shelled us, but our guns quickly silenced them, and they beat a hasty retreat, abandoning their laager, which fell into our hands. The utter exhaustion of our horses made a pursuit impossible.

General French kept his promise. It was not lightly given: it was not lightly fulfilled. On the evening of the 15th he rode into Kimberley from the east, acclaimed by the garrison, and congratulated Colonel Kekewich, the gallant defender of the place, on the way he had kept the flag flying. That same night the news of the relief of Kimberley flashed out to all parts of the British Empire, and John French had added another laurel to his crown.

Yet he did not rest on his laurels. Before his wearied troopers had lain down to rest that night they received the following order: "Troops to stand to, ready to march with guns, horses hooked in, at 5 a.m. to-morrow (16 February) and await orders." It was necessary to follow up the retreating Boers, and, but for the total exhaustion of both men and horses and the terrific heat, French might have scored another success.

At 9 in the morning 2,000 Boers were encountered on the rising ground east of the rail-

THE BOER WAR.
General French's meeting with Mr. Cecil Rhodes at the Sanatorium Hotel, Kimberley, on the night Kimberley was relieved, February 15, 1900.

way, covering a Boer laager and a number of wagons waiting to cross the Vaal River. The advanced positions of the Boers were driven in, but when the moment came to call upon Gordon's cavalry to go forward again, that gallant commander replied that it was impossible. No water was to be had anywhere, the men were parched with thirst, and the horses were well-nigh dead. Nothing further could be done, so French returned to Kimberley.

At eleven o'clock at night great news was received. Cronje with 10,000 men was retreating eastwards from Magersfontein before the advance of the British main army, and General French was to intercept him. The horses were so fagged out that it was decided to detach only one brigade to move out to head off Cronje, so Broadwood was sent, the rest of the division being left to protect Kimberley until Methuen's infantry should arrive.

It is necessary to cast a glance at the position of Cronje, in whose surrender General French played so prominent a part. Cronje had been quick to realize how seriously the relief of Kimberley menaced his safety, and made a dash to break through the converging British columns. He reached the plain stretching down to the Modder at Klip Drift soon enough after the passage of French's Division to note its *spoor* still fresh in the sand. Lord Kitchener was at Klip Drift. Cronje's passage was noted, and "K." sent his mounted infantry to seize Klipkraal Drift, the next fordable spot beyond Klip Drift, whilst he himself went off in pursuit, at the same time despatching to French at Kimberley the message of which we know to head off the flying Boer.

Two fords were now blocked to Cronje. Three remained open to him: Paardeberg, Koedoesrand and Makauw's Drift, which assured him the road to Bloemfontein. He made for Koedoesrand. He calculated shrewdly—but not shrewdly enough—that French's cavalry which was operating north of Kimberley would seek to intercept him in that direction, and that his safest plan was the most daring—namely, to march east between the British columns. Once again French's military genius revealed itself, his extraordinary faculty of looking into the enemy's mind, "of seeing what was on the other side of the hill," as Wellington once put it. The General guessed that Cronje would make for Koedoesrand Drift, as the main road led to it, and it was situated closest to Bloemfontein. Accordingly he made for it too, as swiftly and as directly as the wretched condition of his horses would allow him.

Cronje was completely surprised. The previous evening, he knew, French's cavalry had been 12 miles north of Kimberley, yet on his approaching the Koedoesrand Drift he found his tenacious foe in front of him again, 35 miles to the southward of the relieved garrison. French struck at once. He intended to deal the enemy a blow before he had recovered from his surprise, so as to prevent him at all hazards from pushing past the British, even at the cost of his wagons and guns. At a quarter to eleven in the morning our first gun spoke, bringing the Boer up short in his tracks. In a moment French saw the salient, a high ridge overlooking the river, which it was imperative to hold, and a squadron of the 10th Hussars, racing the enemy for it, snatched it away from under his very nose.

The end came slowly, but came at last, for it was inevitable. For days we watched the wagon-train lying lifeless on the river bank, whilst every hour brought the infantry nearer. Captured Boers described the alarm wrought by the unexpected appearance of the British force, and expressed incredulity when told it was French's. French, they said, was miles

away, north of Kimberley. On the arrival of our main body French went off to check the Boers, who were pouring in from all sides in the hope of being able to relieve Oom Cronje. He succeeded in entirely clearing the country between Koedoesrand and Paardeberg of the enemy, and it was during these operations that the news came by heliograph of the surrender of Cronje and 4,000 men to Lord Roberts at Paardeberg. It was the turning of the tide, the first great British success after months of reverses and vicissitudes.

Lord Roberts resolved to press the enemy before he had had time to recover from the shock of Cronje's surrender. The Boers were strongly entrenched in force at Poplar Grove on the Modder River, and it was the British Commander-in-Chief's plan to attack them from the front with infantry while the cavalry under the indefatigable French took them on the left flank. Unfortunately our plans were not carefully enough prepared. Had the Boers defended their positions against the infantry it is morally certain that French would have surrounded them and captured the whole force under his old opponents, de Wet and Delarey, together with its guns. But the Boers had learnt their lesson at Paardeberg and did not wait for the encircling movement to be completed. They slipped away under cover of night, and General French, crippled by broken-down horses, had the mortification of seeing the Boers only three miles ahead fleeing in disorganized retreat without being able to close with them.

General French went after the enemy, who fell back on Abraham's Kraal and Driefontein, and after some hot fighting drove them out again. At 3 p.m. on March 12 French, who was at Steyn's Farm, sent in a summons to the people of Bloemfontein to surrender or evacuate the town within 24 hours. This was in the old days of war when combatants obeyed the rules of the Hague Convention to give civilians notice of an intended bombardment. The next afternoon a deputation of citizens came out and surrendered the city to Lord Roberts, who forthwith made his entry.

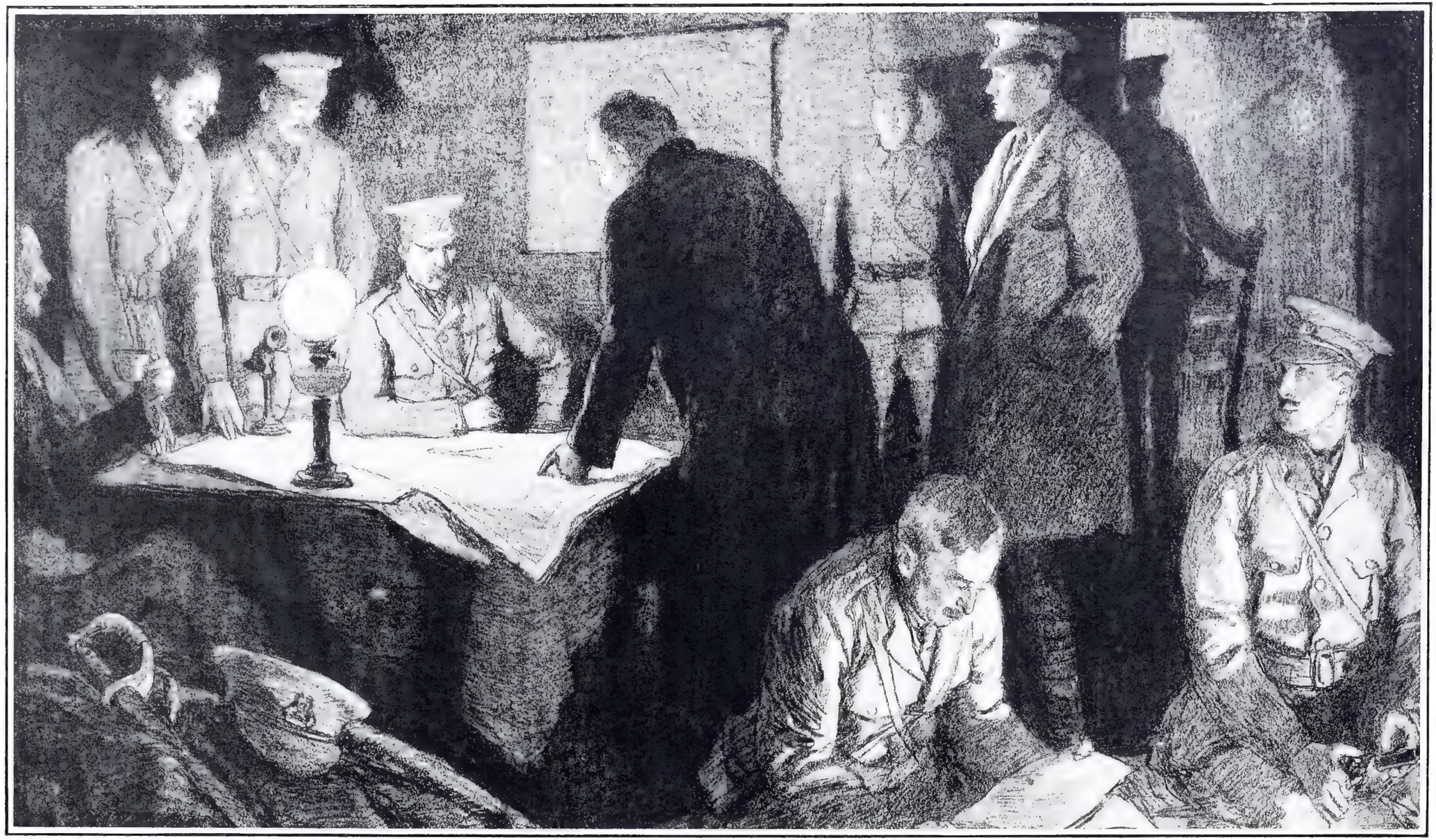
It will henceforth be necessary to summarize very succinctly the large part which General French played in the protracted operations of the war following on the occupation of Bloemfontein, Johannesburg and Pretoria. He remained in South Africa right through to the bitter end, though his health was none too good, and his appointment to succeed Sir Redvers Buller in the command of the First Army Corps at Aldershot in October, 1901, would have afforded him a perfectly justifiable reason to return home.

After the occupation of Bloemfontein he again came into prominence in the attempt which was made to cut off the Boer army which had invested Wepener, and had been subsequently held by Sir Leslie Rundle before Dewetsdorp. But French's reputation was so high with the Boers that the news of his departure from Bloemfontein was the signal for their retreat, and he could not come to grips with them. Dewetsdorp was followed by hard fighting round Thaba 'Nchu, in which French was called upon to prepare an opening to allow of the advance of the right flank of our main Army marching on the Vaal on its way to Johannesburg.

Hurriedly recalled to Bloemfontein on May 3 the Division was rapidly refitted to take part in Lord Roberts's advance. The brunt of the fighting on the march fell on the cavalry. French, watchful and resourceful as ever, pushed the Boers back from one defended position after another. On May 24, with *Birthday*, in honour of the Queen's birthday, as the countersign, French crossed the Vaal and received signalled congratulations from our forces on the Free State side on his entry into Transvaal territory. Four days later General French's advance posts were looking down on the tall smoke-stacks of the Johannesburg mines.

General French's movement to envelop Johannesburg from the west brought him up against General Louis Botha's whole force. He refused battle, however, and held the enemy until General Ian Hamilton's Division could advance to the attack. On May 31 Lord Roberts's two Divisions marched almost unopposed into the suburbs of the gold city, and the Commander-in-Chief received its surrender. The occupation of Pretoria followed, this falling to the infantry, much to the chagrin of French's men.

The capture of the capital seemed to hold out a fair chance of peace. Negotiations were actually begun with Louis Botha, but they were eventually broken off, and once more General French was in the saddle driving the Boers eastward. The Boers were found in position on a long ridge known as Diamond Hill. Operating on the flank of Lord Roberts's Army,



HEADQUARTERS UNDERGROUND.

British officers at work in a subterranean bomb-proof apartment.

and concise *critique* his opinion of the commanders and their accomplishments.

In 1907, after five strenuous years at Aldershot, Sir John French was appointed Inspector-General of the Forces. In the previous year Lord Haldane had gone to the War Office, and after "a period of gestation," as he put it himself, was prepared to launch his Army reforms: first and foremost of which was the establishment of the General Staff, the creation of the Expeditionary Force, and the organization of the Territorial Force. In looking about him for the best man to help him in the realization of his reforms Lord Haldane decided in his mind that Sir John French was the man whose mind had the necessary flexibility, whose character possessed the requisite energy to carry his schemes to fruitful accomplishment. As Inspector-General of the Forces—a position which in the hands of a strong man like John French was one of real influence—the General laid the bases of the little Expeditionary Force which he was destined to take across to France, and of the Territorial Army which was to form the backbone of the great National Army which sprang from the Expeditionary Force.

Sir John French occupied the post of Inspector-General of the Forces for four years. During this period he made a number of trips abroad to study Continental armies and to inspect the defences of the Empire. He visited Russia for the army manœuvres in 1907, and Canada in 1910, taking occasion in the course of this trip to go to Ceylon, Singapore and Hongkong. He paid several visits to France for the French manœuvres, and in 1911, at the height of the Franco-German Morocco crisis was present as the guest of the Emperor William at the German cavalry manœuvres at Alt-Grabow.

In 1911 Sir John French appeared to have reached the summit of his career. In that year he was appointed to be Chief of the Imperial General Staff, the highest position in the British Army. He was called upon to supervise the whole field of army administration, the military defence of the Empire, operations of war and intelligence, training, discipline and military law, medical and sanitary matters, and the administration of the army credits. He was appointed to the post in February, and by the summer the war clouds were gathering thick on the horizon of Europe. Germany's action in despatching the small cruiser Panther to Agadir, ostensibly to "protect German interests," in reality to blackmail the French Government into "compensating" Germany for her renunciation of Morocco, provoked a grave European crisis which at one moment seemed certain to develop into war. When the history of that anxious summer comes to be written it will be seen how much the country was indebted to Sir John French's far-seeing and all-embracing preparations for supporting France against what would have been a frivolous and altogether unjustifiable attack.

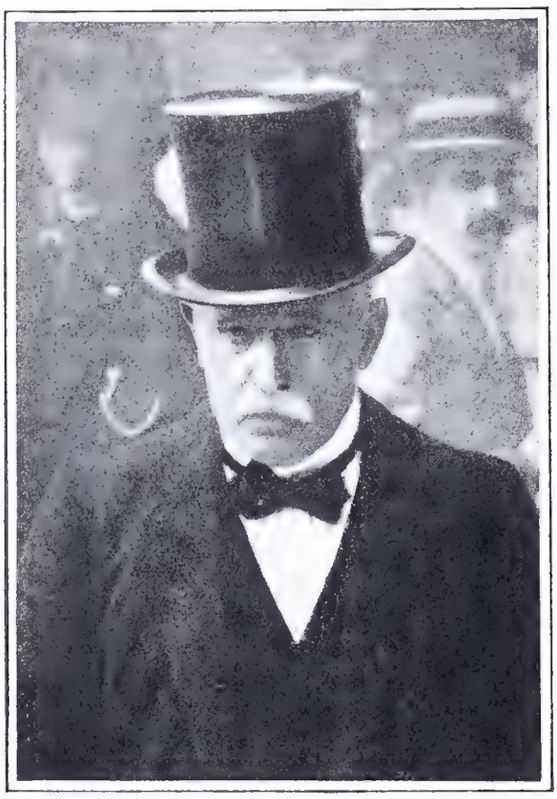
In March, 1914, as the result of the Curragh crisis, to which allusion has already been made, Sir John French resigned and went into private life to enjoy a rest for the first time in many years. From his retirement he was summoned in August, 1914, in a crisis which he had foreseen and prepared against for years, to take over the supreme command of our Army in the field.

The life of John French is a mirror of the man. In it you may see him clearly portrayed —calm, courageous, honest, resolute, direct, a man of action, a man of impulses, quick to anger, slow to lasting enmity. The crushing responsibility of the supreme command of our forces in the field left a lasting mark on his exterior. When he went to France in August, 1914, he was still the John French of South Africa, a little whiter in hair and moustache perhaps, florid and fresh in complexion, inclining to stoutness.

The John French who unflinchingly watched the breaking of our line by the Prussian Guard at Ypres in October and as imperturbably heard the news of its readjustment, who conducted the fight at Neuve Chapelle, who calmly held the Germans in their second great Ypres effort in April-May, 1915, was a sterner man.

His figure had grown much slighter. His face was tanned with exposure. His hair and moustache were a purer white. The furrow between his eyes was deeper. His square chin had even a more aggressive thrust than before.

But his spirit was the same. There was the same laughter of youth in his curiously reflective blue eyes, the same quick reaction to a humorous sally, the same amazing cheerfulness, the same eternal youthfulness which made one of his friends declare him to be "a strange mixture of a schoolboy and a great general." The constant strain of the campaign never led



GENERAL FRENCH
Leaving the War Office on the eve of his departure for the seat of war, August, 1914.

him to neglect his personal appearance. All through the harrowing days and nights of the great retreat from Mons, when he and his staff worked far into the night, when headquarters were frequently changed, he took the same pride in his personal appearance as the last-joined subaltern of a crack cavalry corps, wearing his gold-braided Field-Marshal's cap at the same jaunty angle as of yore.

What Julian Ralph, the war correspondent, wrote of him in South Africa was as true then as it is at the moment that these words are written:

> He is quiet, undemonstrative, easy and gentle. When you are with his command, you don't notice him, you don't think about him unless you are a soldier, and then you are glad you are there. . . . He is perfectly accessible to anyone, but speaks very little when addressed. He must be a fine judge of men for he has a splendid staff around him—splendid in the sense that they are all soldiers like himself and all active and useful.

They called him "Silent French" in South Africa, not so much because he was inclined to taciturnity, but because of the curiously-detached air which always distinguished him. Even when engaged in the most animated conversation he would seem to be carrying on a dual mental process, as indeed was often the case. Much reading and deep thinking in his leisure hours all through his life had given him the habit of mental concentration so that his subconscious self might grapple with the problems arising out of his day's work whilst outwardly he was indulging in the current conversation in the direct and forcible manner that was his wont. Only later would those about him discover, on being surprised by one of his lightning decisions, that he had been quietly and methodically sifting the whole situation in his head whilst seemingly engaged with other things.

His memory was great and retentive. He had the map-mind of a great general always accustomed to look at landscape from the standpoint of military operations. He had an extraordinary acquaintance with the battle-fields of Europe, and had visited in person the country in which most of the campaigns of Marlborough, Napoleon and Wellington had been fought as well as the battlefields of the Franco-Prussian war. He invariably arrived on the ground with the whole plan of the battle so clear in his head that he could find his way from point to point on the ground without a guide. An intimate personal friend of the Field-Marshal, who accompanied Sir John on many of these expeditions, relates that, being at Reims on one occasion with half an hour to spare, he purposely led him on to the site of one of Napoleon's battles in the vicinity. Sir John recognized it at once. "There should be a river here," he said, although there was no trace of one in the neighbourhood. They addressed themselves to a peasant who declared there was no river. On the Field-Marshal insisting that there must be a river somewhere in the vicinity the man replied, "Il n'y a pas de rivière maintenant mais il y a un ruisseau!" The Field-Marshal's memory had not played him false.

The Irishman in Sir John French came out very strongly in his quick temper. He was always a just man, and anything like injustice or intrigue or pettiness goaded him to the quick. He was death on inefficiency. All his life he had striven to make himself and the men under his command efficient. He was ruthless in weeding out elements which in his opinion seemed likely to prejudice his work. If he had given a man his chance and he failed, that man would have to go though he were John French's greatest friend.

Above all things he valued the commander who knew his own mind, and who had the courage of his convictions. Anything like want of energy or irresolution exasperated him.

Though he demanded of his generals that, like himself, they should not shrink from sacrificing human life if needs be, he would call mercilessly to account that officer who should waste wantonly but a single man of his army over which he watched with the tender solicitude of a father.

He admired more than anything else the man who makes a good fight under adverse circumstances. Highly chivalrous himself and the very incorporation of the cavalry spirit, he entertained the highest opinion of the gallantry and dash of the French troops. It was the chivalrous trait in his character, derived from his Irish blood, which was a quality in him strongly appealing to the French, helping to maintain, often in most difficult circumstances, equable relations between the British and French supreme commands.

Sir John French did not know French fluently but he knew and admired the French Army. General Joffre and he mutually admired one another, utterly dissimilar in character as they were—both great thinkers, but the one mathematical, methodical, stolid, the other intuitive, quick, impulsive.

In character Sir John rather resembled the brilliant and mercurial Foch, who commanded the group of the Allied armies from Compiègne to the sea, with whom, throughout the war, he was in constant contact, and with whom he always entertained the most cordial relations. A signed photograph of General Foch, which he presented to Sir John French at Christmas, 1914, with a cordial dedication, perpetuated their comradeship of arms on the field of battle.

Sir John French was always hotly intolerant of ignorance. Nothing exasperated him more

[Photo. S. d'A.

SIR JOHN FRENCH. GENERAL JOFFRE. AND STAFF OFFICERS.

than the meddling with the Army by politicians. He often expatiated on this theme. Walking with a friend from a House of Commons debate on the Army on one occasion he said he thought he would turn politician. "But you know nothing about politics!" expostulated the other. "I know as much about 'em as those fellows do about the Army!" was the reply. "It never occurred to me," he would say, "to go to St. Paul's and preach a sermon. That is the Archbishop of Canterbury's job. Nor should I think of asking Mr. Justice Darling to let me dispense justice for him. But everybody thinks he can run my show; everybody thinks he knows something about soldiering."

He was a soldier first and last, a soldier in the British sense. Like every decent-minded man he had a horror of war, but, convinced that the era of universal peace had not arrived, he was always penetrated with the necessity of being prepared for war. He foresaw the great European conflagration. He knew that the Germans would wage the war ruthlessly. Therefore he never wasted his breath in discoursing indignantly about German "frightfulness." His attitude of mind was that the Germans would be "frightful" as long as we allowed them to be.

Like every soldier, he was convinced of the necessity of some form of obligatory military training for the youth of Britain. "The first duty of every good man," he said to some boys in Glasgow on one occasion, "is to be patriotic and loyal and to serve his country: to be unselfish and to remember that his country and all concerning the good of his country should come first in estimation. Therefore, it is the duty of every good man to take a fair share in his country's defence."

Nothing delighted Sir John more than to be able to pay a tribute in his dispatches to the soldierly bearing, smart appearance, and splendid gallantry of the Territorial and Canadian troops, the first representatives of Britain's Citizen Army to see service overseas in this war. He always took the first occasion available to go out and visit Territorial divisions newly arrived at the Front. Even in the course of the most cursory inspection it was amazing how much his experienced eye contrived to take in of the appearance and general military fitness of the men.

But naturally his great affection went out to the British Regulars, the stolid and lion-hearted soldiers from the towns and hamlets of the four kingdoms, who had fought with him in Egypt and South Africa, on whose training his whole life had been spent. The direct personal influence which military leaders in the past were able to exercise on their troops, even as recently as in the Boer war, is no longer possible owing to the vast scale on which modern wars are conducted. War has become so much a matter of highly organized departmentalization that the supreme command, nowadays, must perforce delegate much more of its powers than formerly in order to be able to handle, unembarrassed by a host of details, vast masses of troops operating on a gigantic scale. The Commander-in-Chief must have his Headquarters far removed from the firing line, at a distance which enables him to survey adequately the operations as a whole, and removes him from all danger of being captured by the enemy. Thus his influence must always be indirect rather than direct. Opportunities for personal contact with the troops are fewer, and unless he is a man like Sir John French, who was always strongly imbued with the desirability of keeping in personal touch with the men in the field, he will content himself with communicating with the bulk of the Army through the intervening commands alone.

The influence of Sir John French was always immensely steadying for our Army in France. His perfect calm, his unflinching courage, his never-failing optimism were a strong sheet anchor for our men all through the wet winter of 1914 in the trenches in Flanders. The Field-Marshal never lost a chance of motoring or riding out personally to inspect a regiment which had done well in a fight, and of conveying his grateful congratulations to the men in a simply worded, felicitous little speech. In the stern ordeal of the retreat from Mons, when the situation of the British Army was highly critical for days on end, Sir John French might have been seen sitting on the roadside speaking words of encouragement to troops so tired that they literally did not care what became of them. No man knows better than Sir John French the value of praise to weary men. The few kindly words he spoke to the men on these occasions got them on their feet again, forgetful of their fatigue, proud of the record of the British Army, proud of their race, proud of their Commander.

Both in writing and in speaking Sir John possessed a most vivid dramatic touch. What

—— BRITISH SOLDIERS DURING HIS TOUR AT THE FRONT.

illustrated by his life at the General Headquarters of the Army in France. The atmosphere of the Commander-in-Chief's residence was that of an English country house, unconstrained, and informal. The members of his Personal Staff were all old friends of his and of one another. Most of them had served with Sir John in South Africa. He had a paternal way with them all, and called them by their Christian names. For their part, each vied with the other in his devoted loyalty to "The Chief," as Sir John was invariably called.

In working hours work went forward strenuously in the Commander-in-Chief's house. Sir John French himself was accustomed to spend the greater part of the day in his work-room at a great table surrounded by maps. In an adjoining room was the Orderly Officer of the day dealing with the constant stream of visitors, the never-ending deluge of dispatches and reports and messages coming in all day and night. Sir John's day was a long one. Always an early riser, he was one of the first in the house astir, and might be found long before breakfast in his study going through the reports from the different armies and corps which had come in during the night. Immediately after breakfast the Commander-in-Chief had a conference daily with the heads of the Headquarters Staff, the Chief of the General Staff, the Adjutant-General, the Quartermaster-General, the Chief of Intelligence.

At this conference the orders for the day were issued, the situation as regards wastage of men, ammunition, and supplies taken under review, plans for the future discussed. Visits to the different army commanders in the field, the inspection of troops, new guns or recent innovations in the war of the trenches, and work with his private secretary filled in the remainder of Sir John's day, filled it in to such good purpose that he was as often as not the last in to dinner—the hour of which was 8.15—and the first to leave the company assembled over coffee and cigars. Even in quiet times Sir John was a late worker, curtailing his hours of sleep, and often his meals, in order to finish a dispatch or complete some report.

The genial, courtly presence of the man pervaded his whole environment. Was the situation never so desperate, the fighting never so severe, there was no fuss or flurry in the Commander-in-Chief's house. Even during the retreat, when Headquarters was frequently moved, when for days at a time neither the Commander-in-Chief nor his Staff could even take their boots off, Sir John diffused about him the same calm, pleasant atmosphere. At meals the talk was of pleasant English topics, the personal side of the war, the latest good

stories from the trenches, club gossip from town, the progress of our half-a-dozen different wars, *The Times* leader, the latest number of *Punch*. And always Sir John, most delightful of talkers, would take an active part in the conversation, illustrating his remarks with quotations from his great memory stored with the gleanings of a well-filled, studious life.

It was in this clean and healthy atmosphere that the Prince of Wales first came into contact with the great war. The young Prince's heart was set from the start on playing a part in our great struggle for existence, and it was due to his own initiative entirely that State and family objections were overcome so that he might go to the Front with a commission in the Grenadiers. Attached to the Personal Staff of the Commander-in-Chief he slipped quite easily into his place in Sir John French's household, grateful to find that all questions of precedence and rank were waived. Perfectly natural young man that he was, the Prince established himself firmly in the affection of everybody at the Commander-in-Chief's from Sir John French downwards. Delighted himself to be with our Army in the field, his only regret was that he was not suffered to take his place permanently with his brother officers in the magnificent Guards' Brigade of Lord Cavan, "the brigade that never lost a trench" as it proudly boasted. After the Prince had served for some months on the Commander-in-Chief's Staff at Headquarters, he was permitted to go to the trenches from time to time, and there is reason to believe that this concession was secured for him by the Commander-in-Chief himself.

THE PRINCE OF WALES AT THE FRONT.
Sec.-Lt. H.R.H. The Prince of Wales, Grenadier Guards, Aide-de-Camp to Field-Marshal Sir John D. P. French, November, 1914.

CHAPTER LXIX.

THE LAST PHASES OF THE RUSSIAN WINTER CAMPAIGN.

Strategic Results of the First Five Months of Fighting on the Eastern Front—Russian Position about the New Year in the Polish Zone—In the Carpathian Zone—In the East Prussian Zone—The Strategic Scheme of the Second German Winter Campaign—The Battle of Borzymow—The Austro-German Offensive in the Carpathians—Their Advance to the Dniester—Failure and Retreat—The Advance towards Niemen—The Fighting in the Forest of Augustovo—The Advance against the Narev Line—The Battle of Prasnysz—The Siege and Fall of Przemysl—The Place of Przemysl in the Austrian Scheme of Defence.

ONE might say, without being paradoxical, that most of the fighting in the Eastern theatre during the first five months of the war was, on the German side and to some extent also on the Russian, an offensive undertaken in order to acquire a firm defensive line; and indeed, the alternative offensive movements of the two armies resulted in the establishment of a certain "balance," which forms the basis of the fighting during the following three months (January–March).

The failure of the Austrian campaign between the San and the Bug (August 1914), and Russia's powerful counter-offensive in Galicia had deprived the Germanic Powers of the initial chance of turning, from their advanced position in Eastern Galicia, the Russian defensive line of the Vistula, and of compelling our Allies to fall back beyond the Bug. Hindenburg's failures in Poland deprived them of the hope of breaking through the Vistula line by means of a frontal attack through Western Poland.

On the other hand, the Russian defeat at Tannenberg, in August 1914, proved the existence of almost insuperable difficulties in the way of a Russian offensive through East Prussia and across the Lower Vistula, so long as Germany disposed of considerable forces. It was further proved by the events of December 1914 that a march against Cracow would necessarily be an extremely risky, and therefore an impracticable undertaking, so long as Western Poland remained in German hands or open to German attacks, and Hungary formed an easy field for the concentration of Austro-German armies; for under these circumstances a Russian move against the Czenstochowa-Cracow line would be equivalent to an advance along a narrow road open both from the north and the south to flank attacks by the enemy. At least one flank must be secured before an attack against the west could be undertaken. Western Poland could never be held by Russia, still less could it be reconquered until the collapse of the German armies was brought about by a decisive and final victory in some other war zone. An advance from Warsaw through Western Poland, along the three widely divergent railway lines, against the "close formation" of the railways on the Prussian side of the border, was hardly feasible. The Russian offensive, once the line of the Dunajec had been secured, had to proceed across the Carpathians, especially as political reasons promised still further advantages from an offensive against

Hungary. Thus by the end of December the position of the Russian army from the Baltic to the foot-hills on the upper reaches of the Dunajec and of the Biala had become in the main defensive, and Hungary became the chief goal of the offensive of our Allies.

The frontier drawn in 1815 between the three Powers which had partitioned Poland had always been a strategical absurdity; it was infinitely more so in our own days when "the straight line" has assumed such prominence in strategy as well as in tactics. The frontier of Russian Poland forms a gigantic curve; its length, measured from the point at which the river Bug cuts the Austro-Russian frontier to that at which the Osowiec-Lyck line crosses from Russia into Germany, is more than three times that of a straight line drawn between these two points. It could never form the basis of strategic operations, but whilst the straight line of the Oder remained a distant dream of Russian strategists, just as that of the Bobr-Bug remained the goal of all pious wishes on the German side, a new line had to be found in the Polish plain, the plain that stretches from the forests and marshes between the Lower Vistula and the Niemen in the north and the Carpathian mountains in the south. The main features of that line were traced by the failures and the successes of the five months of warfare in 1914; we might call it the line of the Polish rivers. It extends from the Vistula below Warsaw to the hills south of Tarnow. Beginning in the north from the mouth of the Bzura, it follows the course of that river and of its tributary the Rawka, and further to the south that of the Upper Pilica, and that of the Nida to its confluence with the Vistula, thus extending like the chord of an arc within the huge curve of the Vistula; to the south of the Upper Vistula it follows the line of the Dunajec and its tributary Biala, till it reaches the foot-hills of the Carpathians in the region between Zakliczyn and Gorlice. This line, which forms the centre of the Eastern battle front, emerged, as was stated above, from the confused strategical position which had prevailed in the first ten days of December; its strength was proved in the battles which raged around it during the remaining three weeks of the month. The reader will remember the description of these battles given in Chapter LIX., the last that dealt with the Eastern Campaign. They marked the final failure of Hindenburg's attack against Warsaw. After the occupation of Lovicz and Skiernievice (about December 19, 1914), the Germans continued their attacks on the Bzura-Rawka line, but to no avail. They tried to outflank it from the south by a thrust between the Rawka and the Pilica, in the region between Inovlodz, Opoczno and Novemiasto, but were repulsed with heavy losses (December 17–24). In the last days of December they tried to cross the Nida near its confluence with the Vistula, and again failed. The period between December 10 and New Year similarly marks the failure of the flank-attacks from the direction of Mlava against Warsaw, and from the south across the Carpathians against Przemysl, which accompanied the last stages of the second German invasion of Poland. With the forces set free by the retreat in the centre, the Grand Duke cleared the flanks of his army. The defeat suffered in the first battle of Prasnysz (about December 15) forced the Germans to fall back on their own frontier; by a vigorous Russian counter-offensive south of the Tarnow-Przemysl line the Austro-German armies were driven out from all the passes in the Western Carpathians which they had regained in the first half of December.

Let us now consider, in its main outlines, the Russian position at the beginning of 1915, which is also the starting point of the narrative of this chapter of our war history.

We might begin, in the time-honoured style of Caesar, by saying that the whole Eastern area of war is divided into three parts. Its three divisions we might call, for short, the East-Prussian zone, the Polish zone, and the zone of the Carpathians. Each of them possesses marked geographical peculiarities which impart a distinctive character to the warfare within its limits, and each of them has its own meaning within the whole scheme of the war in the East. The battle-line in the Polish zone extends at the New Year along a practically straight line running from north to south. The positions in the other two zones cover its flanks: they form concave curves, within which the Germanic Powers hold the interior positions.

Practically the whole of the Polish zone is a flat plain. The banks of the rivers are mostly marshy, and thus offer good lines for defence. The ground is not unlike that of Flanders. Moreover, though this zone lacks any such decisive termination as that given to the battle-

THE TSAR AND THE GRAND DUKE NICHOLAS VISIT THE TRENCHES.

line in Flanders by the North Sea, it is yet to some extent secluded and secured from the north. The Vistula between Warsaw and Thorn has an average width of half a mile, and is not fordable. There are no bridges across it from the fortress of Novo-Georgievsk in the east till Plock in the west. The work of building a new bridge across it could hardly be undertaken unless one possessed a firm and extensive hold on both banks. Moreover, the total absence of railways in the country between the Novo-Georgievsk-Mlava line in the east, the Prussian frontier in the north-west, and the Vistula in the south-west necessarily restricts the fighting within this area to merely secondary operations, and thereby tends to mark still more strongly the northern limit of the central Polish war zone.

Similar conditions naturally produce similar effects. In that zone, which of this Eastern theatre of warfare resembles Flanders most closely, siege warfare along practically continuous and almost stationary lines of trenches came into marked prominence in December. The new type of warfare from the West spread to that part of the Eastern battle-front. It appeared in its most perfect form at the two extremities opposite Warsaw and opposite

A RED CROSS CONVOY, ESCORTED BY COSSACKS, ON THEIR WAY TO THE FRONT.

Tarnow. Trenches cannot change from a temporary expedient into a permanent strong line unless the means of communication in their rear facilitate the upkeep of a continuous supply of ammunition and men, and also the execution of quick concentrations in case of an attack by the enemy. Of course, a good system of communications is at least equally indispensable for the execution of such attacks. In the West the railway net is more or less equally well developed along the entire front. In Russian Poland the system of communications practically limits the German offensive to the northern section of the line. The three main railway lines Thorn-Lovicz, Kalisz-Skiernievice and Czenstochova-Skiernievice, of which the Germans obtained the entire mastery by the middle of December, form, as it were, a spear-head, though a blunt one, against the Bzura-Rawka line. But, on the other hand, that line, in the close neighbourhood of Warsaw, is no less well provided with means of communication. Further down to the south, the advantage of communications lay with the Russians, and, after the German attempt at breaking through round Inovlodz had failed, this central part of the Polish zone is but seldom heard of. In the extreme south, on both sides of the Vistula, the Nida and the Dunajec form a more continuous and more marked line of division than the rivers further north, being in themselves a more serious obstacle than either the Bzura or Ravka.

The position in the entire Polish zone at the New Year may be described as extremely favourable for our Allies. They hold an advanced position in front of the Vistula, and they are now using as an additional artery of communication that great river, which during Hindenburg's first invasion of Poland had served as a defence for their armies. Should the line of their trenches be pierced, they can again fall back upon the line of the Vistula, and such a retreat would in that zone merely strengthen their position. Their chief railway junctions lie east of the Vistula, and a railway line parallel to the river-front runs on its eastern side, well out of the reach of any guns which might be placed on its western bank. The line approaches closer to the river only between Ivangorod and Novo-Alexandria and south of Warsaw. But round these two points, before which the first German offensive had broken down in October, practically impreg-

nable positions had been constructed since then. Round Warsaw these fortifications, stretching in a semicircle based on the Vistula, have the additional advantage of a short railway line along the western bank of the river, the Warsaw-Gora-Kalvaria line. Our Allies might have abandoned the advanced position along the chord of the arc without any strategic loss, so far as the Polish zone was concerned. If nevertheless they held to it, they probably did so out of regard to the position south of the Vistula, where the line of the rivers meets the Carpathians.

Had the position in the curve of the Vistula been abandoned, it would have been practically impossible to maintain the advanced position on the Dunajec or even a new line further east on the Wisloka. As the events of October had shown, a complete retreat on the line of the Vistula, retaining on the left bank merely the bridge-heads of Warsaw and Ivangorod, would have rendered unavoidable a retreat in Galicia on to the line of the San, and would thus have also led a second time to the raising of the siege of Przemysl. Had Przemysl remained in the hands of the Germanic Powers without ever having been captured by our Allies, it would have given the Austro-German armies a powerful hold on the San line, such as Warsaw and Ivangorod give the Russians on that of the Vistula; a river is not like a sea, and when it intervenes between armies, the side which holds the passages really holds the line of the river. Przemysl, once conquered, can never be again a stronghold of first-class importance, when both sides know every detail of its fortifications and the range of every position around it.

A retreat of the Russians on to the San line would have necessitated in turn their retirement from the Carpathian passes, and an abandonment of their offensive position threatening Hungary. Thus it appears from the long chain of strategic evidence that the position on the Bzura-Rawka line in front of the much stronger position around Bionie was indirectly connected with the offensive in the Carpathians, and the German attacks against it were perhaps meant to lead ultimately to the relief of Przemysl.

Thus again along the Galician front and in the Carpathian zone the position of the Russian Armies about the New Year may be described as one of overwhelming advantage. The line of the San and the Dniester, or even a line in the rear of it, would have been perfectly sufficient for mere defence, or for a war which aimed primarily at the attrition of the German forces, a kind of policy which can always be fallen back upon by our Allies with excellent chances of success. Instead of that, they were holding in Galicia about the New Year all the passes into Hungary, and an advanced position on the Dunajec which was probably meant more as a cover for the operations in the Carpathian mountains than as a threat against Cracow.

We can distinguish from the strategic point of view two zones in the Carpathian moun-

MISS BUCHANAN.
Daughter of the British Ambassador at Petrograd, who is nursing the wounded in the British Hospital.

tains. The one extends from a line due south of Tarnow and the valley of the Biala to the Beskid Pass, the other from the Beskid Pass to the Rumanian frontier. The western sector presents the greater facilities for a Russian invasion of Hungary. The mountain chain and the passes are much lower than they are either in the eastern sector or to the west around the High-Tatra group. Hardly any of the peaks here rise above 3,000 ft., whilst both in the Tatra mountains and east of the Beskid Pass they exceed even 6,000 ft. Between the Biala line and the Beskid Pass, on a front stretching over more than one hundred miles, ten roads and three railway lines cross the Carpathian range (the Sanok

Homona railway over the Lupkow Pass, the Lwow-Sambor-Ungvar over the Uzsok Pass, and the Lwow-Stryj-Munkacz over the Beskid Pass). Between the Beskid Pass and the Austro-Rumanian frontier, on a front slightly longer than that of the western sector, only four roads and a single railway line (Stanislawow-Marmaros-Sziget over the Jablonica Pass) lead from Eastern Galicia and the Bukovina into Hungary.

An invasion of Hungary through the passes of the eastern sector of the Carpathians could only be contemplated if it was to be carried out in cooperation with Rumania. For a purely Russian invasion the natural road is the same as that chosen in 1849, when the dominion of the young Emperor Francis Joseph I. over Hungary was saved by Russian intervention. That road led through the passes around Dukla.

It is self-evident that prolonged siege-warfare is impossible in the Carpathian mountains. Trenches can be used for the protection of particular positions, but there can be no continuous lines of trenches over wooded mountains thousands of feet high. Each separate position can be turned, most of them can be enfiladed from some other position on a higher level. Hence all the fighting in the Carpathians was bound to assume a totally different character from that in the west or in the Polish zone. Artillery proved of less importance, connected action over a wide front proved well-nigh impossible. Hence the frequent captures of big numbers of prisoners by either side, and the low proportion of the numbers of captured guns to those of prisoners.

A RED CROSS DETACHMENT WAITING BEHIND THE FIRING LINE.

Before we pass to a consideration of the East Prussian zone—*i.e.*, the right flank of the Russian battle-front—we wish to draw the attention of our readers to one significant fact. Many of the most important Austro-German attacks in this region aimed at the corner between Tarnow and Jaslo—*i.e.*, at the joint of the two zones, the zone of the Polish plain and the zone of the Carpathian mountains. Here defence by means of connected trenches is rendered difficult by the rising height of the hills, which, however, do not form sufficiently high barriers to prevent the development of a connected offensive

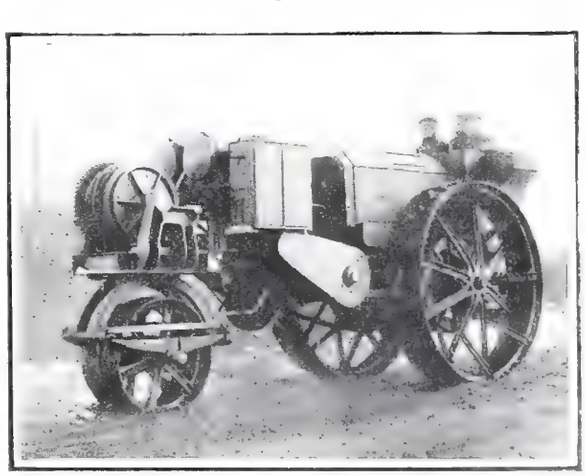
action. It will be here that the Austro-Germans will break through in May, 1915.

Let us now turn to the third zone—*i.e.*, that which we call the East-Prussian zone. It might seem as if in that region nature herself was playing the game of siege-warfare. Each side has its own line fortified by natural obstacles. The Prussian front runs from Tilsit on the Niemen through forests and marshes to Insterburg, from there along the line of the Angerapp and of the Great Masurian lakes to Johannisburg, and from there amidst smaller lakes, morasses, and forests to the fortress of Thorn on the Vistula. The distance from Tilsit to Thorn amounts to about two hundred miles. Sixteen railway lines running towards the Russian frontier cross the line which connects these two towns; these sixteen lines branch out into a network on both sides of the Tilsit-Thorn railway. No two of them are connected by less than three latitudinal lines. The Prussian railway net east of the Vistula is as good as that of Silesia. But whilst in Silesia it serves also the requirements of a highly developed industry and a rich mining district, east of the Vistula it covers a poor, thinly populated country in which the marshes have been preserved as valuable strategic assets.

The Russian line of defence starts with the Niemen above Kovno. North of it the country is of no strategic importance. The Germans would have to advance in it for a very considerable distance through regions practically devoid of roads and railways before they could reach a vulnerable point. From Grodno up to a point about ten miles east of Kovno the Niemen runs in a northern direction. That part of the Niemen on a front of about fifty miles. covers the Petrograd-Vilna-Warsaw railway line, which lies at the Troki junction at a distance of about thirty-five miles from the Niemen, but farther south draws nearer and nearer to the river till it crosses it at Grodno. Some ten miles above Grodno the river Bobr approaches closely to the line of the Niemen. In front and south-east of Grodno, to the confluence of the Bobr and Narev, it is the Bobr line which protects the Petrograd-Warsaw railway and the flank of the Vistula front in the Polish zone. Farther on to the south-east the defensive line follows the Narev to its confluence with the Bug, and finally the Bug to its confluence with the Vistula. At the mouth of the Narev stands the powerful

GENERAL VON EICHHORN.

fortress of Sierock, near the mouth of the Bug that of Novo-Georgievsk. The banks of these rivers are for the most part marshy. In front of the Niemen and the upper Bobr lie the marshes and forests of Suvalki and Augustovo; the lower Bobr and the Narev are surrounded by broken, hilly country, presenting favourable ground for defence. Behind these lines our Allies dispose of good lateral communications, whilst the Germans (once they cross the frontier) have none in front of the Narev. Only three railway lines connect the Petrograd-Warsaw line with the Prussian railways. Farthest to the north a railway line crosses the Niemen at Kovno, and runs by Vilkovyshki to Stalluponen; the next from Bielostok by Osoviec and Grajevo to Lyck; the third from Warsaw by Novo-Georgievsk, Ciechanow and Mlava to Soldau. There are, moreover, two groups of strategic railways based on the Petrograd-Warsaw line which



GERMAN TRACTION MOTOR.

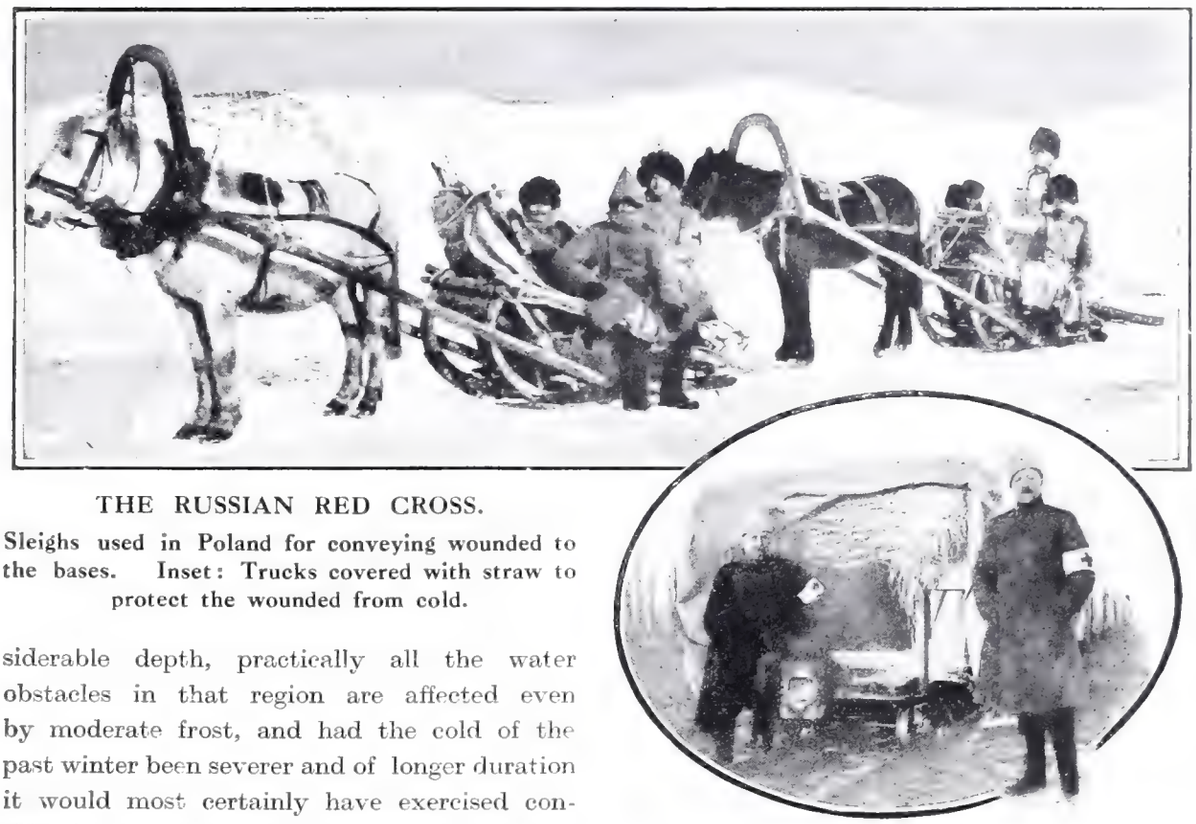
These powerful motors have been largely used for transport purposes over the difficult roads in Poland.

ON PARADE AT THE FRONT.
An Inspection of The Czarina's Infantry Regiment.

do not touch Prussian territory. A semi-circular line runs from Orany by Olita, Suvalki, and Augustovo to Grodno. Three railway lines branch off from the main railway between Bielostok and Warsaw, and meet behind the fortress of Ostrolenka; two of them run parallel to the Narev, which flows there in a big curve; the third practically halves the triangle which the other two lines form with the Petrograd-Warsaw line. Of the country between the Mlava-Warsaw railway line, the Vistula, and the Prussian frontier we have spoken above.

Thus in the East-Prussian zone we are faced by a different situation from that which arises where rivers and mountains form the dividing line. Such rivers or mountains are usually held by one side or the other. But here each side has its own natural barrier on its own territory, and hitherto all the fighting in it resulted mainly in the passing of the strategical "no-man's-land" between the barriers from one side to the other. After the defeat of Tannenberg the Russians fell back on to their own barrier, and the Germans experienced for the first time its intrinsic strength. Since October the Russians had gradually recovered their hold on the land between the barriers, and about the middle of December they repulsed in the first battle of Prasnysz a German advance to the south. About the New Year we find them standing on the eastern edge of East Prussia along the line of the Angerapp and of the Great Masurian lakes, on the southern edge more or less along the frontier up to Mlava. In the country to the west of Mlava the position is uncertain and in the main unimportant. The only part of the right bank of the Vistula between Novo-Georgievsk and Thorn which is of some importance for the Russians—namely, opposite the trenches on the Bzura—is in the hands of our Allies. The only part which is of importance to the Germans is that between Vloclavek and Thorn, as on that stretch the Thorn-Lovicz railway runs so close to the left bank of the Vistula that it could be shelled from the opposite bank of the river. That part of the right bank is held by the Germans.

With regard to the East-Prussian zone it ought to be marked that frost is of special importance for all military operations within it, as water forms the chief obstacles on both sides. With the exception of the Vistula and the Great Masurian lakes, which are of con-



THE RUSSIAN RED CROSS.

Sleighs used in Poland for conveying wounded to the bases. Inset: Trucks covered with straw to protect the wounded from cold.

siderable depth, practically all the water obstacles in that region are affected even by moderate frost, and had the cold of the past winter been severer and of longer duration it would most certainly have exercised considerable influence on the warfare in these regions.

Let us now consider briefly the main strategical outlines of the second winter campaign. The lull in the fighting which prevailed in the Eastern theatre of war during the first three weeks of January was only partially due to the "bad weather," in which it is our national habit to see the origin of all evils. It is true the weather of those weeks was a serious obstacle to the development of any wide strategical schemes. In a country where the scarcity of railways enhances the importance of roads, it would seem inadvisable to embark on vast enterprises whilst the conditions of transport are changing almost daily. In the first days of January the weather was so mild that even small streams—as, *e.g.*, the Rawka—were free of ice; the whole of Poland was one vast quagmire. Before the middle of January begins a succession of alternate spells of cold weather and thaw. It is only after January 20 that prolonged cold weather sets in throughout the whole Eastern theatre of war, and that for the first time a winter campaign "based on ice and snow" can be contemplated.

Yet the weather was not the only cause of the uneventful character of these first weeks of January. The end of December saw the last flickers of Hindenburg's gigantic Eastern campaign, with its two invasions of Poland, and the great number of satellite operations extending over the entire Eastern front. Before a new scheme of equal greatness could be launched, both armies required at least a short period in which to re-form and recuperate.

The operations which ensued on the resumption of the offensive by the Germanic Powers give the casual observer the impression of being disconnected and almost aimless. Similarly, the fundamental features of the whole scheme tend to escape the observation of the man whose close attention is concentrated chiefly on one sector or zone of the vast Eastern theatre of war. A careful examination shows, however, an inner coherence and a leading idea, which runs like a red thread through all the different operations carried on over a front exceeding 500 miles. Warsaw, in its central geographical position, still seems to be the centre also of all military activities. And yet the contention that even now the capture of Warsaw remained for Hindenburg the main objective of the ensuing campaign seems to us not to be borne out by the facts, at least not in its exclusive, sweeping form. It was perhaps rather the Niemen - Bobr - Narev - Vistula-San-Dniester line which was his goal: he seems to have aimed primarily at wresting from the Russians the outlying territories

TRANSPORT IN THE CARPATHIANS.
Unloading food and Red Cross supplies.

between the line of the San and Dniester and that of the Dunajec, the Biala, and the Carpathians. These Galician districts are for the Russians the indispensable basis for their offensive against Hungary, and for a subsequent advance against Cracow and Silesia; nor could the siege of Przemysl have been continued had they been reconquered by the Germanic armies. Had these armies reached the line of the Vistula, San and Dniester, the Russians would have lost all chance of taking the initiative in the two southern zones, even if they retained at Warsaw and at Ivangorod bridge-heads on the left bank of the Vistula. These gates to the west could have been easily masked by the Germans. Moreover, in an unconquered and relieved Przemysl the Germanic armies would have gained a firm and valuable foothold beyond the line of the big rivers. A deadlock might have been reached in the East by the Germanic Powers such as would have enabled them to concentrate their whole attention on the Western campaign. In the East Prussian zone Hindenburg's offensive pursued also certain local aims, to which we shall return later on, but even that part of the second winter campaign stands in a close connexion with its primary objective, the wresting of the initiative from the Russians; and the main basis for that initiative lay in Galicia.

The lull in the fighting during the first three weeks of January was least marked on the Bzura-Rawka line, where the operations had assumed an almost entirely tactical import. The lines were facing one another, in some places at not more than a hundred yards' distance, everything was continually ready for action, and any advantageous moment could be used for carrying out minor operations. It was naturally from here that in fact the entire second winter campaign was begun. We shall abstain for the present from entering into any details of the fighting in the different zones. Such description tends to divert the attention of the reader from the large, general outlines of the operations. We shall deal with their details further on, taking them zone by zone. Meantime we shall limit ourselves exclusively to the bare strategical outlines of the second winter campaign.

About January 30 began the well-known German attack behind the Rawka on the Borzymow-Wola-Szydlowska line, which lasted a whole week. There was at the time, and has been ever since, much speculation concerning its meaning. Could Hindenburg have hoped to break through to Warsaw? Did he not know of the second and even stronger defensive line round Blonie? People have talked and written about the fighting of that week in front of Warsaw as if it had been unprecedented in its scale and intensity. As a matter of fact it was nothing of the sort. It seems very probable that practically the entire attack was carried out by what we might call local forces. The

current estimate puts the strength of the German army engaged on the Borzymow front in the first week of February at about 140,000 men and one hundred batteries. During the fighting round the Barrows (Mogily) between January 5–11 two German corps are said to have been engaged; one was always kept in action, the other in reserve. In February additional forces were obtained, probably by a concentration of reserves from the Bzura, and perhaps also from the south. The fact that towards the end of the week the Russians succeeded with comparatively small forces in breaking through the German lines near the mouth of the Bzura, seems to confirm the supposition that troops had been withdrawn from that part of the front. One other significant fact concerning the battle of Borzymow seems to be fairly well established—namely, that the Germans did not keep behind their lines reserves in any way proportionate to the forces actually engaged. It is evident that Hindenburg could not expect three or four corps without reserves first to break through the advanced Russian lines (a success which, considering the experience of previous attempts on that part of the front, he could not have hoped them to achieve without serious losses), and then to storm a second line of fortifications and take a town such as Warsaw. Probably all that he wanted them to do was to hurl back the Russian forces on to the Blonie line. Their task was certainly important. At Borzymow they were meant to drive the thin end of the wedge into the Russian line extended far in front of the big rivers, Vistula, San and Dniester; had they succeeded, dozens of blows would probably have followed along the entire line and the outer cover of the Russian position, shattered at one point, would have been broken in. We have plenty of evidence at hand which shows that the Austro-German forces were at that time preparing to assume the offensive at a number of important points along the entire front. The supposition sometimes expressed, that considerable forces were at that time shifted by the Germans from one section of the Eastern front to another, seems unfounded. The Germanic army in the Eastern theatre of war was not a stage army which went out by one door and re-entered by another. We cannot hope to ascertain with any degree of exactitude its aggregate size. Estimates naturally differ; yet most of them put its strength in the Eastern theatre of war in February at not less than 30 German and 20 Austrian army corps. We cannot see events in their proper perspective as long as we persist in thinking of the attack on Borzymow, carried out by three or four out of 50 army corps, as the battle royal of the second winter campaign in the Eastern theatre of war. The German forces in front of Warsaw could never have amounted to much less than

RUSSIANS AT PRAYER.

Soldiers unable to obtain admission to a barn, where a service is being held, listen outside bareheaded.

GERMAN TRENCHES NEAR MLAVA.

100,000 men. They did not only attack Warsaw, they were also entrusted with the defence of Lovicz and Skiernievice, the two most important railway junctions of Western Poland.

The attack on Borzymow was not a new attempt against Warsaw, nor even an attempt "to distract the attention of the Russians." It was a blow at one point of the Russian front which covered like a shell the line of the big rivers. Had the Russians been pushed back to their second line round Blonie, they would, as we have already explained, have been obliged to give up the rest of the country on the left bank of the Vistula down to the bridge-head of Ivangorod. The line of the Nida would have collapsed, carrying with it the Russian front on the Dunajec and Biala. The Austro-Germans would have been able to advance right up to the San—the natural prolongation of the line of the middle Vistula—Przemysl would have been relieved. The first blow, which was meant to have such far-reaching consequences, failed miserably.

No blows were delivered between the Pilica and the Carpathians; yet we have good reasons to suppose that at the time when the thrust was delivered at Borzymow, considerable Austro-German forces were concentrated around Kielce and on the Tuchow-Gorlice line. If after the failure of Borzymow increased activity can be marked in the Carpathians, it is not from the exhausted corps on the Rawka that the victims were drawn for the daily holocausts of Koziowa. These reinforcements were probably derived from the points of concentration from which no blows could be delivered with any chance of success after the attack on the Rawka had ended in failure.

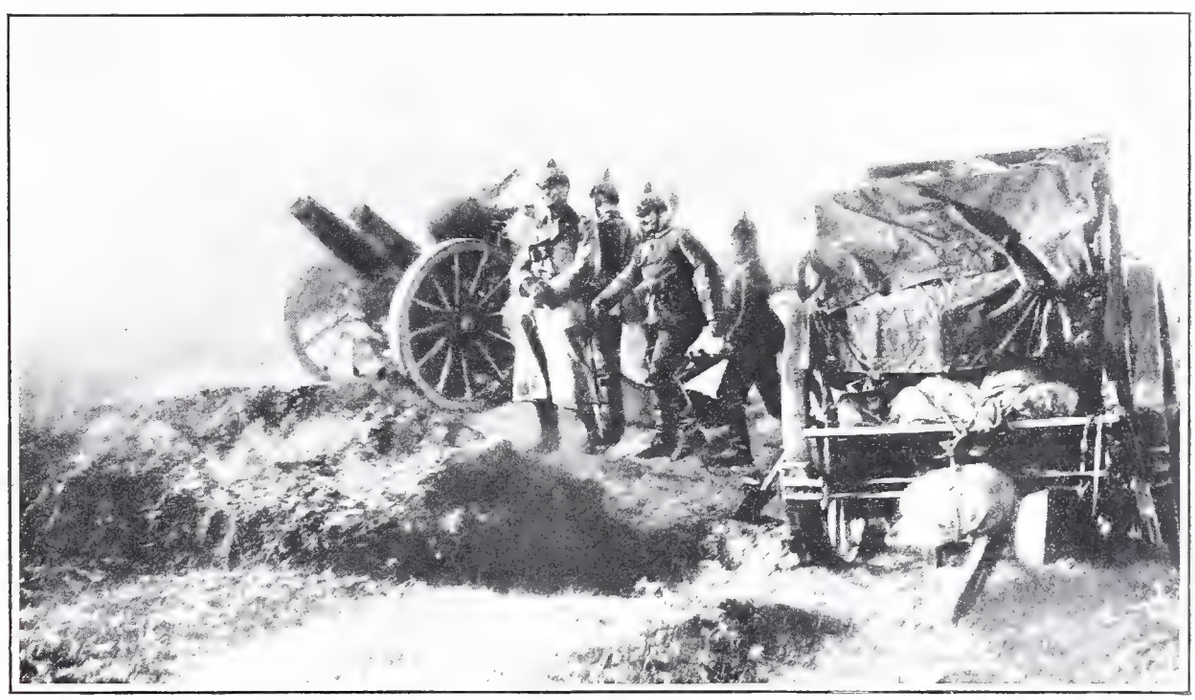
The Austro-German offensive in the Carpathians began before the week of the final attack on Borzymow. About January 23 the Germanic forces began to advance towards the mountain passes along the entire front of over 200 miles, from the Dukla to the Kirlibaba. After the failure in front of Warsaw, the direction of the main offensive becomes discernible; the attacks in the Western Carpathians round the Dukla and the Lupkow Pass lose considerably in intensity, whilst the offensive in the East is being pressed with great vigour. The seriousness of the move soon becomes evident. Should the Germanic armies succeed in driving the Russians back to the Dniester, the latter would probably have to fall back on the San and Vistula along the whole line from Przemysl, up to and beyond Warsaw. Unconquered Przemysl, astride on the Woloczyska-Lwow-Tarnow line, prevents the Russians from deriving full advantage from the excellent double track of that railway. Przemysl has to be avoided by running the trains over the circuitous path of poor side-lines (Lwow - Rawa - Ruska - Jaroslaw). The greater, therefore, is the importance of the inferior single-line southern railway, the so-called "Transversal Line," leading from Husiatyn by Stanislawow to Sanok and Jaslo. No Russian railway line meets it at Husiatyn, but between Czortkow and Sambor five railway lines connect it with the Northern Woloczyska-Lwow line, and two meet it from the south; it is thus connected by side-lines with no less than four Russian railways. Its sector between Sambor and Sanok had formed for the last three months the basis for the operations against Przemysl in the north and Hungary in the south. Had the Germanic

forces reached the transversal line between Sambor and Stanislawow, the Russian armies on the entire front from Sambor to Tarnov, and up to the mouth of the Dunajec, would have had to rely for supplies on the trains coming from Lwow round by Rawa-Ruska and Jaroslaw. The position would have been quite untenable. Even the permanent occupation of Stanislawow by the Austrians would by itself have weakened very considerably the position of the Russians, though they would have been left with three lines connecting the northern with the southern railway.

One Austro-German army began to advance towards the end of January through the Uszok Pass towards Sambor, another through the neighbouring passes of Vereczke and Beskid towards Stryj, a third across Wyszkow towards Dolina, a fourth (purely Austrian) army across the Jablonica Pass towards Delatyn and Nadvorna, a fifth was invading the Bukovina across Kirlibaba and Dorna Vatra. Only the last two groups succeeded in reaching their objectives; the other three, despite the most desperate efforts, failed to progress any considerable distance beyond the crest of the Carpathian Mountains. The eastern army-groups reached Stanislawow on February 21, and continued their advance, following the transversal railway to the west, towards Kalusz; moreover, they began to press in a northerly direction towards the Dniester between Jezupol and Halicz. Had at least the army from Wyszkow broken through the Russian line, and then met from the west the eastern armies, the latter might have consolidated their strategic achievements, but they received no help from any of the three groups operating to the left of them. Indeed, the Russians were not only able to contain the Germanic army which should have progressed from Wyszkow to Dolina, but could even detach forces to threaten from the south-west the march of the Austrians between Stanislawow and Kalusz. Meantime another Russian army, having defeated the Austrian attempt to push it across the Dniester, began to menace Stanislawow from the north. The position of the Austrians on the entire Kalusz-Stanislawow line was thereby rendered exceedingly precarious. After suffering terrible losses they were compelled to fall back on Nadvorna and Kolomea, abandoning most of the results of a really fine military stroke, for which, moreover, the Germans cannot claim the credit.

On the last day of February a new offensive began in the Western Carpathians. It became evident that the coup of Stanislawow had failed, and that only a successful direct attack against the ring which surrounded Przemysl would save the starving fortress. This offensive failed to make headway, and Przemysl fell on March 21.

The German operations in East Prussia commenced on February 7; they were, of course,



BIG GUNS OUTSIDE LODZ.
German heavy howitzer in action.

THE GRAND DUKE MICHAEL ALEXANDROVITCH IN THE CARPATHIANS.

meant to synchronise broadly with the operations in the other two zones, but it would be very risky to try to establish any detailed connexion between their dates. The East Prussian campaign had aimed at preventing the Russians from taking advantage of the cold season, when the freezing of the marshes greatly reduces the strength of the East Prussian defensive line. As it has the same effect on the barrier along the Niemen, Bobr and Narev, it is also the one season during which the attack against the Russian line, which had failed in October, might be attempted with some chance of success. Finally, special circumstances, which we shall discuss more fully when dealing in detail with the East Prussian campaign, seemed to offer good prospects for inflicting a serious defeat on the Russian army, spread at that time over a long front extending from Tilsit to Johannisburg. The first blow was delivered in the direction of Grodno. It was meant to annihilate the Russian army, which the Germans outnumbered in the proportion of two to one, and to carry the German offensive across the Petrograd-Warsaw railway line; they would thereby have seriously impeded the transport of reinforcements from Russia for the defence of the Narev-Bobr line. Against that line was to be directed the second blow; its main attack was to proceed along the Mlava-Novo-Georgievsk and the Lyck-Osowiec-Bielystok railways. Had the German scheme succeeded, Warsaw and the entire line of the Vistula would have been threatened with supreme danger. The true battle royal of the war would have been fought under circumstances most unfavourable to the Russians. We know that the German forces in East Prussia amounted at that time to fifteen army corps. Only eight were engaged in the attack on the Tilsit-Johannisburg line. It would be absurd to suppose that the Germans would have concentrated such enormous reserves had they not contemplated a second stroke of supreme importance. The dispersal of the other thirty-five Germanic corps over many different parts of the front, which might have been held by considerably weaker armies, does not prove anything to the contrary. Either Russia had to follow suit and make similar dispositions of her forces, or she would have run the risk of suffering local defeats which might soon have developed into a general débâcle: for it was only against lines of primary strategic importance that the Germanic forces were concentrated. As Germany possessed over Russia a marked superiority in communications, with her lay the initiative of concentration or of fighting simultaneously in several theatres. Had she wished to effect a concentration of dispersed forces, she could still have done it at any moment in less time than it would have taken Russia to do the same.

The plan of the East-Prussian campaign failed completely. Except for two divisions—*i.e.*, one-eighth of their forces—the Russians effected their retreat from the East Prussian front with remarkably small losses. The Germans reached the Niemen, and even crossed it at one point, but they never got to the Petro-

RUSSIAN CAVALRY.

The Native Division, or, as it is called, the Wild Division.

grad-Warsaw railway line, and thus were unable to interfere with the transport of reinforcements, supplies and munitions to the Narev-Bobr line. Their offensive to the south failed even more miserably: they were badly defeated in the one big battle fought on the southern front (the battle of Prasnysz), and the great move finally fizzled out in a series of battles of very secondary importance, most of which, in addition, went against the Germans.

At the end of our period, after three months of frantic efforts, the position of the Germanic Allies was worse than it had been about the New Year. They had gained ground in the "no-man's-land" in East Prussia, and reconquered most of the quiet strategical backwater of the Pruth valley. They had lost Przemysl.

For weeks the attention of the reading public of Europe and America was concentrated on the fighting line of the Bzura and Rawka. At last their strange names had acquired familiarity in the minds, perhaps even in the

FORDING A RIVER.

The Grand Duke Michael Alexandrovitch, with Count Vorontsoff Dashkoff, in front.

speech, of West-European nations. We enjoyed special facilities with regard to news from that quarter. Warsaw is near, and newspaper correspondents again and again visited the battlefield. Who would know of Agamemnon, had there been no Homer ?

We know more about the nature of the fighting on these two small rivers than of the battles in the Carpathians or in the forests on the Lithuanian border. In its main outlines it resembles that of Flanders. Plenty of mud ; more work with picks and spades than with rifles ; continuous shelling ; for diversion—sniping. At first the small rivers intervened between the German and the Russian lines. This, of course, was very advantageous for purposes of defence, as long as there was no frost. These rivers (more especially the Bzura, which is lined by marshes on either bank) offer a splendid field of fire, and make the rapid advance of an attack impossible. These advantages are lost as soon as the frost comes. The river ceases to be a serious obstacle, and the tactical situation is radically changed.

In the beginning of January the Germans succeeded in establishing their trenches on the left—*i.e.*, the eastern—bank of the Rawka on a front of two miles. We were never told how that was done, but it is quite possible that the Russians withdrew of their own free will. The banks of the Rawka are steep. Once it is frozen, and can be crossed with ease and speed, trenches on or near its banks cease to be in a favourable position. The range of a river bank can be easily calculated from maps. A steep bank is likely to offer dead ground to the attacking side. The Russians found much better positions some two miles east of the Rawka, round Borzymow, Humin and Vola-Szydlowska, which are situated on a higher level upon a ridge between the Rawka and thé Sucha. The surrounding woods offered further advantages in the choice of ground.

From the middle of January we hear little about fighting round Sochaczew, where battles had raged in December. It now centres further to the south, first round the Barrows (Mogily), then round Borzymow. Since the trenches are no longer separated by a river, warfare here comes more and more to resemble the pattern with which we are so well acquainted in the instance of Flanders. A group of trees, the ruin of a lonely building, a small hillock, become the objectives of actions in which hundreds of lives are lost. In some places—*e.g.*, in one sector near Mogily—artillery can no longer be brought freely into action because the two lines of trenches have drawn too close together. That, however, it must be remembered, is by no means the general rule. Where it does occur, for artillery must be substituted the mole-work typical of our operations in Flanders. The Russian official *communiqué* of January 27 contains a phrase which sounds familiar to those who have followed the fighting in the west. " In the region of Borzymow our troops, supported by sappers, attacked last night the enemy's sap and dislodged the Germans by means of mines." *Tout comme chez nous.*

At last we reach in the first days of February the culmination of the siege-warfare that had been carried on during the preceding six weeks. The weather had been improving for some time—on January 30 the ground is hard as rock. The moment for a general attack had come. On the front of not quite seven miles (10 versts) the Germans now deployed seven divisions, supported by the fire of one hundred batteries. During a single hour these batteries dropped 24,000 shells on the Russian trenches. Several divisions deployed on a front of only one verst. They attacked in close formation, with a depth of from ten to twenty-two men. The Germans themselves gave these troops the nickname of " doomed divisions." They gained some ground on February 2, but only to lose it on the next day. On February 3, by means of bayonet attacks, our Allies reconquered the lost trenches near Borzymow, drove back the Germans from Humin, and regained possession of Vola-Szydlowska. The fighting continued on February 4, and on February 5 it again assumed an aspect of sheer frenzy on the part of the Germans. It lasted all night, and became severest at dawn. On February 7 begins the counter-stroke of the Russians. From the right bank of the Vistula they direct a cross-fire against the German positions on the left bank of the Bzura, near its confluence with the Vistula, and subsequently push home attacks round Kamien and Vitkovice. On the same day they make progress in the angle between the Bzura and Rawka. The Germans have to detach forces from the Borzymow front for the defence of the threatened positions. The battle round Borzymow is losing its intensity. On February 8 the Russian artillery destroys

THE KAISER AT THE POLISH FRONT.

the distillery at Vola-Szydlowska, which the Germans had changed into a fort. By now the Germans have given up all hope of driving back the Russians on to the Blonie line, and they settle down on the Bzura-Rawka front to a quieter routine. We hear no more of their daily sapping and nightly attacks which they had made "the custom of the land" during the previous weeks. Only once again, about February 27, we read of some livelier fighting between Mogily and Bolimow.

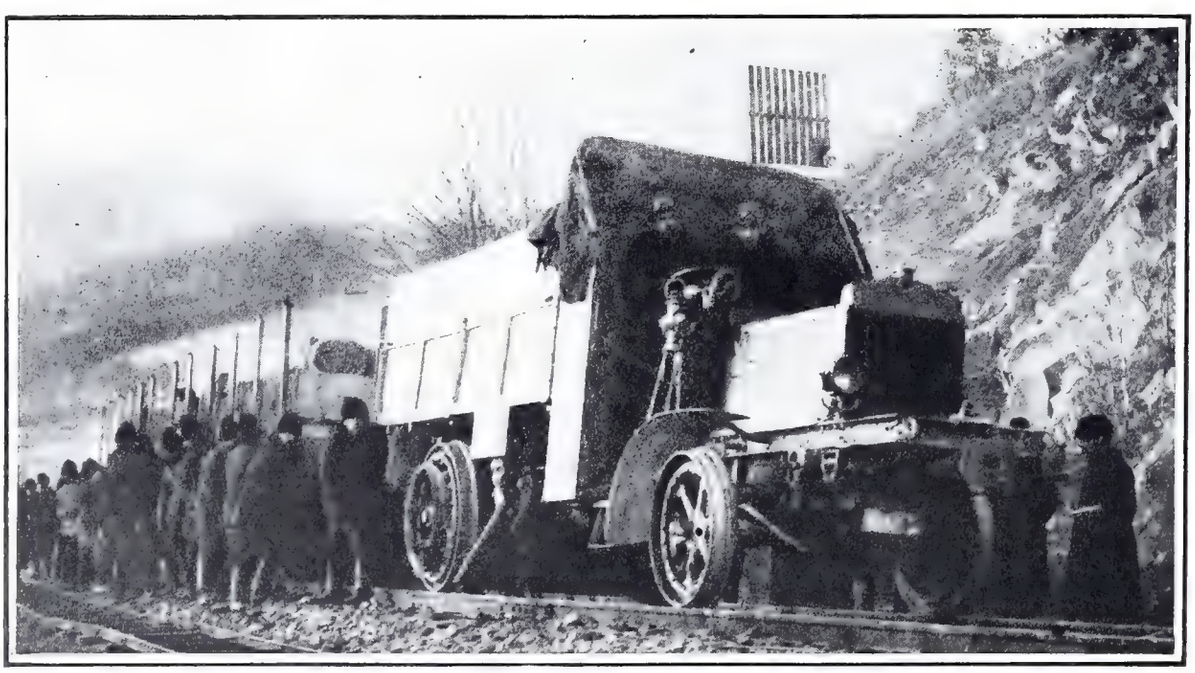
During the week of their attacks on Borzymow they are said to have suffered no less than 40,000 casualties, but one can look through files of German or Austrian papers without finding even a hint or suggestion of the fierce fighting which was going on in front of Warsaw in the first week of February. Only occasionally, through excerpts translated from Italian papers, could those who knew something of their Governments' policy in giving and withholding news, glean some intimations of the battle that raged round Borzymow. The Death's-head Hussars are impressive in peace time, but in war silence is kept at home about "doomed divisions."

We hear of hardly any serious fighting taking place in the Carpathians until towards the end of January. No wonder; whatever may be the difficulties and dangers of a winter

RUSSIAN SLEIGH TRANSPORT.

campaign in the mountains, in deep snow and heavy frost, they are not nearly so serious as the obstacles which stand in the way of strategic operations during periods of alternate frost and thaw, or where the conditions of transport differ according to the elevation. We have before us the notes taken by an eye-witness of the fighting in the Uzsok Pass about January 25. In the passes, he writes, the snow lies several feet deep, while in the valleys the roads are covered with mud and slush. However hard and continuous may be the labour spent on their maintenance, the heavy transport breaks them up almost beyond repair; only severe frost can save them. Caterpillar wheels, which do their work along muddy roads, cannot be used on snow. Sledges have to be fixed under the wheels. Guns have to be taken to pieces and then transported on several sledges. But sometimes one gets on to a piece of ground where neither sledge nor wheel can work. *e.g.*, where on a steep slope the road loses itself under a crust of ice. Neither nailed boots nor "roughed" hoofs can obtain a foothold. Men have to crawl round these places leading their horses, and when they reach some higher level ground have to pull up with ropes whatever transport is to be handled. It will be easily understood that under these circumstances the transport even of the lightest guns is an arduous matter, and shells cannot be fired off at the rate of thousands a day.

Infantry attacks are in most cases exceedingly difficult; it is almost impossible to remain unseen in the snow, and against the white background men offer excellent targets,



AUSTRIAN TRANSPORT.

Motor lorries with wheels adapted to travel on the Carpathian railways.

whatever the colour of their uniforms may be. Nights, even when there is no moon, are clear with the light reflected by the snow. Where there is no snow, entrenching is very difficult, because even if the surface is soft, the earth below is frozen. It may, however, be noticed that in the matter of entrenching our Allies enjoyed a considerable advantage over the Austro-German forces; they were much better provided with entrenching tools on long handles.

The Austro-German campaign in the Carpathians began towards the end of January. Each pass was at first a practically isolated theatre of war. Lateral connexions could not be established between the troops which were operating in various passes. Yet there was some kind of interdependence between the bodies which were advancing or retreating along consecutive parallel roads or railways. Just because of the great danger of becoming isolated and encircled, each separate corps seems to have followed the general trend of events in its neighbourhood. About January 23 the Austro-German armies opened their attack against the Carpathian passes along the entire line of over two hundred miles. A week later we can distinguish three groups along the Carpathian front. In the west up to the Lupkow Pass the attack fails completely. In the Central group, between the Lupkow and the river Lomnica, the Austro-German armies succeed in crossing the passes, but this advance is permanently arrested at their northern mouths. Only in the extreme south-eastern section does this offensive reach its immediate objective. Between the Dukla and the Uzsok Pass the Germanic armies are thrown back into Hungary; on the Hungarian side of the Carpathians our Allies hold the important junctions of roads at Zboro (five miles north of Bartfeld) and at Swidnik—in other words, the southern ends of all the passes around Dukla. From the eastern branch of the Dukla the Russians are trying about February 7 to outflank the Austrian position in the Lupkow Pass by pushing forward past Czeremcha to Mezo-Laborcz. They succeed to a large extent in their turning movement; we are told that between January 26 and February 6 the Russian corps operating in the Lupkow has made prisoners 170 officers and 10,000 of the rank and file of the Austrian Army. Yet the Austrians retain their hold on the heights east

GENERAL VON BELOW.

of the pass. More than a month later we hear of severe fighting round Wola Michowska, east of Lupkow, and it is not until March 11 that the Russians succeed in taking Smolnik and Lupkow itself.

The westernmost of the passes carried by the Austrians after a three days' battle (January 23-26) is the Uzsok. The configuration of the ground round the Uzsok Pass is such that it cannot be held against a numerically superior enemy who is prepared to pay heavily in lives for the venture. Practically all the positions in the Uzsok Pass can be turned. The pass itself rises to a height of over 2,500 ft., and is closely surrounded on all sides by mountains, which stand between 3,000 to 4,500 ft. high. The mountain slopes are covered by thick woods, under cover of which it is possible to advance even in the snow, without being perceived by the enemy. Nor do the positions on the southern side of the pass offer a favourable field of fire. The road and railway follow a winding, narrow depression, which sinks steeply towards the Hungarian plain. In somewhat over twelve miles the level of the road drops by almost 1,500 ft. It was only natural that at the end of January and beginning of February the Austro-German attack on the Uzsok should have been pressed with greater insistence than on any of the passes to the west of it; from the Uzsok Pass they could have threatened the direct railway communication that runs by way of Sambor between Lwow and the Russian armies south of Przemysl. Even a successful offensive from the extreme south-east corner of Galicia could hardly have rendered altogether

untenable the Russian position in the Western Carpathians, unless the Germanic armies succeeded in breaking through the Uzsok to Sambor, and through the Vereczke and the Beskid Passes to Stryj. Before the superior forces of the enemy in this central sector our Allies withdrew from their positions in the passes to more favourable ground, in each case about ten miles to the north-east. These new positions proved impregnable to frontal attacks, and not easily liable to outflanking movements. North of the Uzsok Pass the Russians withdrew on to high ground beyond the river Stryj, near the town of Turka; from the Vereczke Pass on to the slopes round Koziowa, behind the river Orawa; from the Beskid Pass to a position near Tuchla, protected on its wings by the

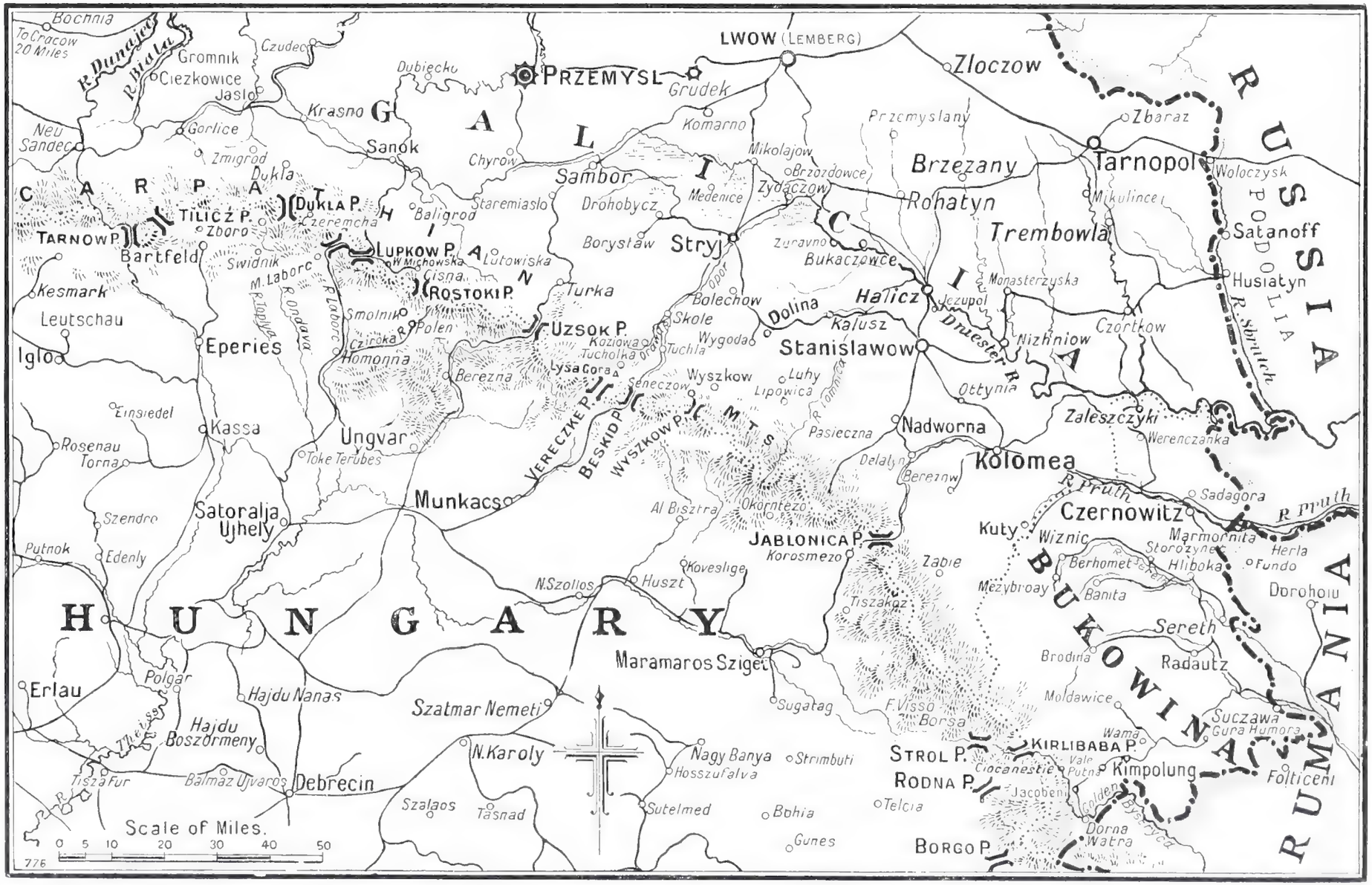
FORTRESS OF PRZEMYSL.
Austrian Officers directing artillery fire.

gorges of mountain streams. In the Wyszkow Pass they checked the German advance quite close to the frontier on the line of Seneczow.

On February 6 one of the most desperate battles ever fought in the Galician zone developed in front of the Russian positions at Koziowa. The Munkacz-Skole-Stryj road crosses, south of Koziova, a bare mountain range, named Lysa Gora ("the bald mountain"). The Lysa Gora rises to a height of over 3,300 ft., and then gradually sinks down towards the Orava valley, facing the slopes above Koziova, and presenting an excellent field of fire. The Koziova slopes, on the other hand, are in their upper part covered with thick woods, which screened from the view, and partly also from the fire, of the enemy the Russian forces awaiting the Germans as they approached along the road that crosses the "Bald Mountain." The Germans at first tried to take the Russian positions by storm. On a single day (February 7) no fewer than twenty-two attacks were delivered by them, but whenever they gained a footing in the Russian lines, they were dislodged by furious counter-attacks with the bayonet. The assault failed, and the open slopes below the woods held by the Russians were strewn thick with German dead. From that day onwards the German attacks on the Russian position in that region continue to repeat themselves for the next five weeks with a regularity reminding one of the attacks against the Bzura-Rawka line. The last time we hear of the operations round Koziova, before the fatal day when the fall of Przemysl changed the whole character of the fighting in the Carpathians, is on March 16. The Russians have then captured Orawczyk, a point threatening the left flank of the German position in front of Koziova.

By far the most interesting fighting developed meantime in the extreme south-eastern corner, which we might call the district of the Pruth, or the Pokucie-Bukovina sector. "Pokucie," the "Corner-District" of Galicia (kut=corner), is closely allied in geographical and strategical respects to the Bukovina, "the Country of the Beeches" (buk=beech). From the south it is cut off by the Carpathian "massif" of Transylvania, from the north by the deep cañon of the Lower Dniester, which with the forests surrounding its fantastic curves forms a "dead belt" between Austrian Podolia and the Bukovina. To the west its main artery of communication runs along the Pruth to Kolomea. From Kolomea the railway divides into two branches; one of them leads over the low watershed of the Pruth and the Dniester to Stanislawow, and from there to Lwow. The other branch leads from Kolomea in a south-western direction across the Jablonica Pass by Marmaros-Sziget to Budapest. He who holds Kolomea holds all the connexions of this small Pruth district with the western world.* At the opposite end, in the south-east, its river valleys,

* We may neglect the Luzany-Zaleszczyki-Czortkow line. It is a wretched small branch line linking up the Bukovinian railways with those of Podolia. The only point of importance about it is that below Nizniow its bridge at Zaleszczyki is the only one over the Dniester on Austrian territory. Its existence does not in any way affect our argument. The Russians never lost their hold on Zaleszczyki since they first occupied it in the last days of August, 1914.

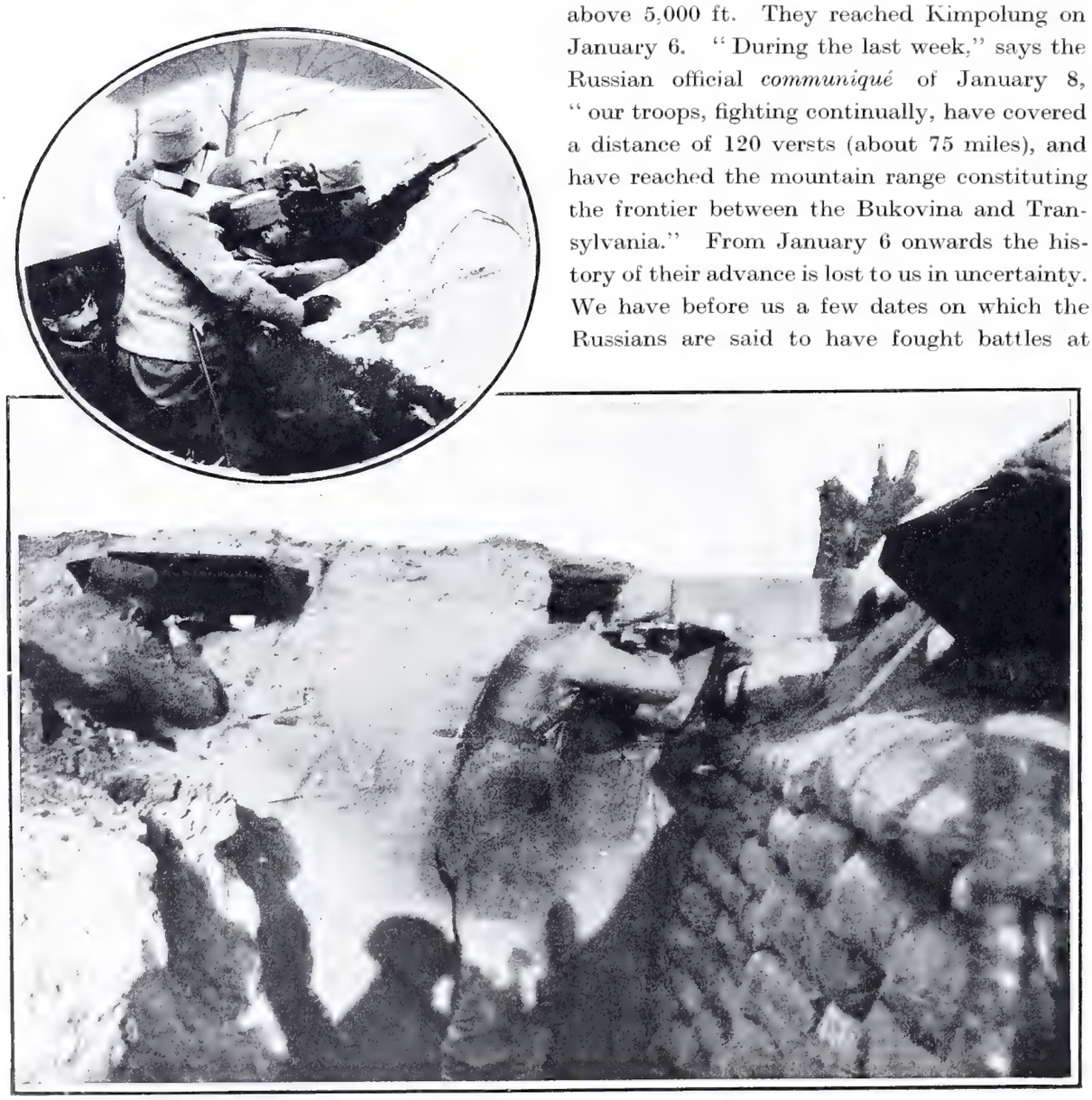


THE FIGHTING IN THE CARPATHIAN ZONE.

railways, and roads open into Rumania. Up to the New Year there was hardly any reason for paying attention to such a quiet backwater as was the valley of the Pruth from the exclusively strategical point of view.

About the New Year this region began to acquire a new significance. The population of South-Eastern Bukovina and of Transylvania is mainly Rumanian by language and extraction. The valleys of the Pruth, the Seret and the Moldava, which include practically the whole Bukovina, lead towards Rumania; in the opposite direction, over the passes of Dorna Vatra and Kirlibaba, and farther west in the "Pokucie" across the Jablonica, lie the easiest roads into Transylvania. Towards the end of 1914 Rumanian intervention was thought of as a matter of the very near future. The advance of Russian troops into Transylvania, where they would have been greeted by the Hungarian Rumanians as the liberators from Magyar oppression, might have accelerated the entrance of Rumania into the European War. The Rumanian nation could neither have left to strangers the entire work of bringing freedom to its compatriots, nor could it have allowed, in case of a local reverse of the Russian Army, liberated Rumanians to pass again under the hated Magyar yoke.

About the New Year hardly any Austrian troops remained in the Bukovina. In the first days of January Russian troops began to advance in the farthest south-eastern corner of the Bukovina, and at the same time in the Pokucie, towards the Transylvanian frontier. From Gora Humora they marched in midwinter towards Kimpolung over passes rising to 2,000 ft., and between mountains ranging above 5,000 ft. They reached Kimpolung on January 6. "During the last week," says the Russian official *communiqué* of January 8, "our troops, fighting continually, have covered a distance of 120 versts (about 75 miles), and have reached the mountain range constituting the frontier between the Bukovina and Transylvania." From January 6 onwards the history of their advance is lost to us in uncertainty. We have before us a few dates on which the Russians are said to have fought battles at



AUSTRO-GERMAN OUTPOSTS.

In a German trench on the Bzura. Inset: Austrian observation post.

RUSSIAN FIELD GUN IN ACTION.

certain places in their advance towards the Kirlibaba. Looking at the map we are unable to establish any order between them. Are we faced by a mere confusion of dates in the transmission of news, or do these bald, and in appearance confused, statements, which in their briefness recall the style of ancient inscriptions, contain the story of a heroic expedition of a kind rare during the present war of mass-fighting, of machines that mow down a harvest of men, and of advances which are measured by yards? The facts are these: We are told that Russian troops occupied Kirlibaba (3,000 ft. high) on January 16. There is only one road from Kimpolung to Kirlibaba; it follows the railway to Dorna Vatra by Vale Putna to the village of Jacobeni; it then turns at a sharp angle to the north-east, following the valley of the Golden Bystryca,* and leads past Ciocanestie to Kirlibaba.

Now mark the order of dates and of places. Kirlibaba was occupied on January 16, then fighting took place round Jacobeni on January 18, at Ciocanestie on the 19th, round Kirlibaba between January 21 and 23. Did the first Russian detachment reach Kirlibaba, across mountains almost 5,000 ft. high, whilst the glass was approaching zero and the snowdrifts were lying deep in the valleys? And is now another detachment making its way along the beaten track fighting against the Austrians? Indeed, the crossing of pathless mountains in mid-winter would have been a venture which only Caucasian mountaineers could have dared to undertake. Or has, perhaps, the Austrian advance across the Borgo Pass by Dorna Vatra already begun, and are now the Austrians trying to trap the Russian vanguard which had proceeded to Kirlibaba by the previously deserted road past Jacobeni? We had not heard of any fighting preceding their entrance into Kirlibaba on January 16. Whilst fighting is now going on at Kirlibaba (January 21–23), we suddenly hear on January 22 of another battle fought at Vale Putna—*i.e.*, between Kimpolung and the parting of the two roads at Jacobeni. Is that another Russian force marching to the rescue of its comrades who are fighting a desperate battle on a secluded pass? We cannot tell; even the thin thread of dates and names of places suddenly breaks off, and from neither side does there come any further news of what happened when the World-War had reached the snowbound seclusion of a forlorn Rumanian pass bearing a strange Slavonic name of legendary derivation. The World-War had reached it, and nations that never had heard of one another or of the strange land in which they now met, joined in battle. Mountaineers from the Caucasus, speaking languages unknown anywhere outside their wild Asiatic valleys, met German Alpine troops coming down on winged feet, on Norwegian skis, over the slopes of the Pass of Kirlibaba.

About January 21 the Russian advance ceases: and now follow battles that are better recorded because they are of more importance to the strategy of the whole Carpathian front. An Austrian army, about 50,000 men strong, under the command of General Freiherr von Pflanzer-Baltic (late Commandant of Brünn and subsequently Inspector of Austrian military schools, one of the ablest strategists of Austria) was approaching the Pruth valley, moving

* Not to be confounded with the two Bystrycas near the confluence of which lies Stanislawow. "Bystryca" is a very common name for mountain rivers, "bystry" signifying in Slav languages "rapid."

A LULL IN THE FIGHTING.

A Russian Regiment, after being relieved in the trenches, having rest and refreshment before returning to the firing line.

along all the available roads that lead from Transylvania into the Bukovina and the Pokucie. By February 13 the Austrians reached the Wizni-Kuty-Kosow-Delatyn line. On the same day, advancing from the west, they reached Starozyniec, on the Seret. Their eastern column in the Bukovina was making slow progress; it seems to have been their intention to move rapidly from the west into the valley of the Seret, and thus to cut off the small column of Russians which had advanced into southern Bukovina. Their plan failed. The Russian garrison of Czernowitz, though it could hardly have counted more than a few thousand men, sent help to their retreating comrades, effected a junction with them on February 16, and on the next day the whole Russian Division withdrew from Czernowitz eastwards to the Russian town of Novosielica. It was by this time impossible for it to join the more westerly Russian forces, which were falling back on Stanislawow. For on February 14 the Austrians, issuing from the Jablonica Pass, had reached Nadvorna; during the next six days a desperate battle raged between Nadvorna and Kolomea, the Austrians having brought by railway across the Jablonica a powerful train of artillery. The Russians had at first looked upon that Austrian expedition towards the Bukovina as a political manœuvre rather than as a strategical move. They were now fighting for the important railway junction of Stanislawow, only twenty miles to the north of Nadvorna. At last they have to give way. The Austrians enter Kolomea, which had remained in Russian occupation since September 15, and on February 21 they reach Stanislawow. On the next day the Russians throw fresh troops into the town, but are not able to hold it for long. A gigantic battle begins in the broad valley between the two Bystrzycas and the Dniester. It lasts a week, but neither the Petrograd nor the Vienna *communiqués* say anything about the fluctuating course of the fighting. The Viennese papers do not even report that the Austrians have ever entered Stanislawow. Are the Austrians expecting soon to be able to announce a *coup* which would surpass even the reconquest of Stanislawow, or do they foresee that the triumph will be short-lived and that they are fighting a costly but hopeless battle? And yet they are pushing to the west for all they are worth, towards those railways which feed the Russian armies in the Carpathians. Will they perish, caught between the Russians advancing from the Dniester in the north and from the Carpathians in the south, or will they be able to cut the communications of those Russian armies which are barring the way to the Germans and Austrians advancing from Hungary by the Wyszkow Pass against the heights of Tuchla and Koziowa?

Under date of February 25 we read that the Russians have captured the village Luhy, south of Dolina, and half-way between Kalusz and the Carpathian mountains. We had not heard of the Austrian advance in the rear of the Russian armies that are fighting in the Carpathians. We do not know at first whence these Austrians are coming. But on the next day we hear of another battle a few miles farther to the north-east, and then again farther in the same direction, and we begin to realize that a counter-attack is being delivered by the army that holds the northern mouths of the Carpathian passes in support of their comrades who hold at Halicz and Jezupol the bridge-heads on the southern bank of the Dniester. Unless the Austrians succeed in reaching the bridges of Halicz, Jezupol and Nizniow, and thus stopping the inflow of Russian reinforcements into the battle area between the Dniester and the Carpathians, they cannot hope to hold Stanislawow. They themselves have only a single railway line—namely that which crosses the Jablonica, over which they can bring up fresh troops from Hungary. They are beaten in a pitched battle fought south of Halicz on March 1. On March 4 the Russians enter Stanislawow; the Austrians withdraw on Nadvorna and Kolomea. The Russians feel that a chapter has closed in the history of the war, in so far as that distant corner of Galicia is concerned, and publish the post-mortem of the Stanislawow campaign. They have captured in that region during the fighting which took place between February 21, the day on which they evacuated Stanislawow, and March 4, the day on which they re-entered it, 153 officers and 18,522 rank and file of the Austrian Army, 5 guns, 62 machine guns, etc., etc.

After March 5 a lull begins in the fighting south of Stanislawow. The next report which reaches us is dated March 16, and announces that the two armies are again in contact on the plateau along which leads the road from Stanislawow to Ottynia. To those who know that country this dry piece of news suggests

a whole story of warfare. A long line of down rises to a wide plateau, on the level surface of which no cover is to be found. But the hollows of its slopes on either side offer magnificent opportunities for skilful approaches over dead ground, and for well-directed indirect fire from hidden batteries. But again we hear nothing more about the battle. A much bigger, a much more important, engagement is developing far away in the west.

Przemysl can no longer be saved by distant victories and far-reaching effects of complicated strategy. It has to be reached by the shortest way if it is to be preserved for the Germanic Powers. On February 28 the Austro-German attacks recommence due south of Przemysl, between the Lupkow and the Uzsok Passes. They hammer their way up to Baligrod and Lutoviska, some fifteen miles from the Hungarian frontier. And from the west they knock fiercely against that corner between Gorlice and Ciezkowice, where the river-line of the Polish plain loses itself among the foothills of the Carpathians. Not a day passes without a battle. But not only do the Germanic forces fail to gain any ground, they actually lose positions which they had held for many weeks in the Uzsok and in the Lupkow.

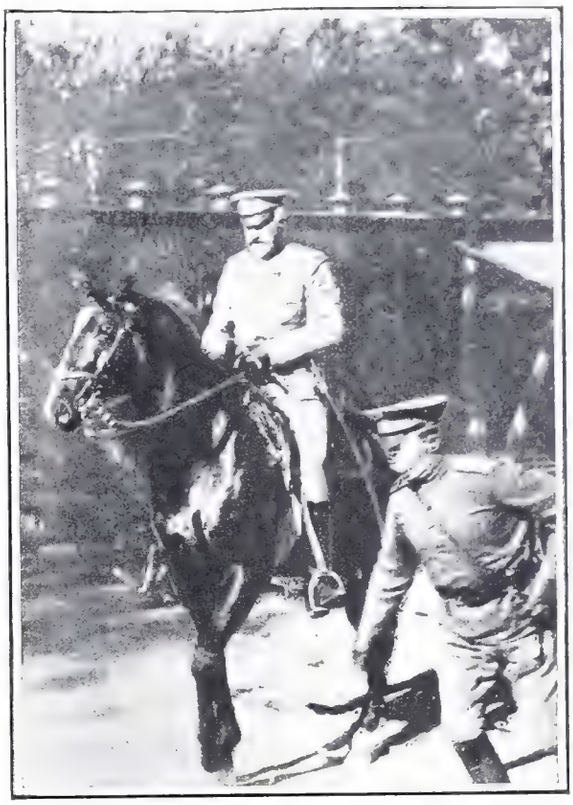
On March 22 comes the news that Przemysl has fallen.

For weeks and months the German and Russian armies had been facing one another on the outskirts of the East-Prussian forests and along the line of lakes and marshes. In the south, between Angerburg and Johannisburg, the German lines were practically impregnable; all they had to guard were a few narrow passages between the big lakes. As the period of cold weather was drawing near the Russians began to press forward on both flanks of the Masurian lakes. Towards the end of December they had again expelled the Germans from Mlava; about the middle of January they continued their advance on both sides of the Warsaw-Mlava railway line. From Ostrolenka on the Narev they were now pressing forward towards the Prussian frontier; west of Mlava they occupied Sierpiec (45 miles from Thorn) and reached the line of the River Skrwa. About January 20 we hear of further advance in that direction; they reached Dobrzyn, and a few days later they began to threaten the German positions at Lipno. The resumption of the motor-car

IN THE CARPATHIANS.
Austrian Chasseurs with their skis passing over a primitive bridge.

service between Warsaw and Plock testifies to the growing feeling of security in the district. Yet we ought to be careful not to overrate the importance of the progress made in this region; it was made by small forces in a zone of very secondary importance. The movement was of value only in so far as it could form the basis for a further advance in force to the west or, which seemed more likely, for a new advance against Osterode. North of the line of the Masurian lakes the progress of the Russian armies was most marked round Darkehmen, to the west of Pilkallen and south-east of Tilsit, in the valleys of the Szeszuppe and of the Inster. Along their upper course the banks of these rivers are wooded and marshy, farther west their banks rise and offer an easier field for a military advance. Towards the end of January the marshes which shelter the positions round Insterburg were frozen. Could the Russians, taking advantage of the season, have pushed across this barrier, a dangerous flank-attack might have been carried out against the German positions that extended along the line of the Angerapp and of the big lakes.

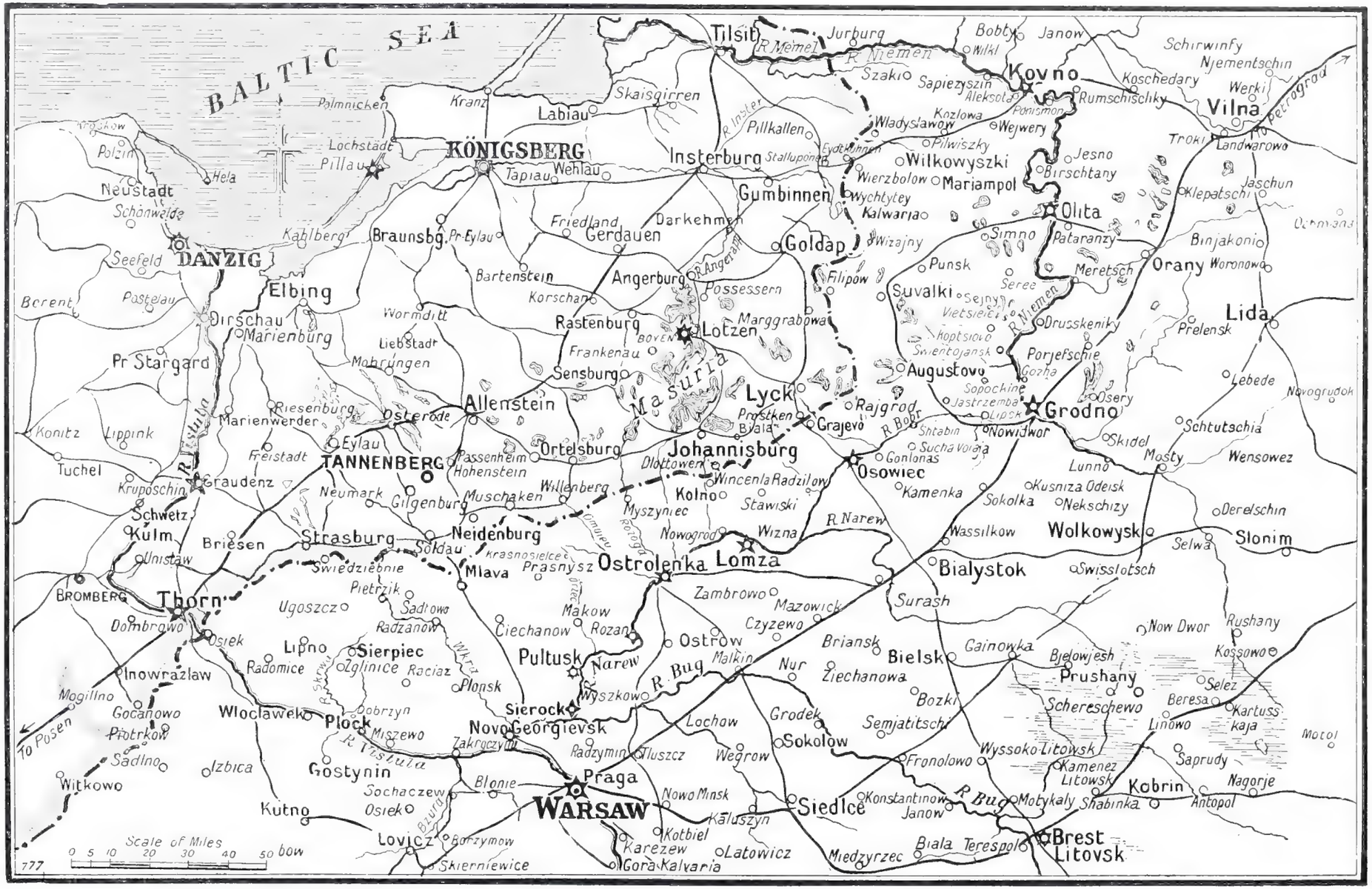
In the first days of February the Germans began to offer vigorous resistance to the Russian advance south-east of Tilsit and also along the southern edge of East Prussia, on the Myszyniec-Chorzele front. These movements were, however, not the beginning of a counter-offensive in these regions, but a screen for the concentration of troops towards the east, behind the great lakes. The German counter-offensive was to take their line for its base and strike in an easterly direction. Look at the map and you can see clearly the scheme of the German offensive. The real objective of their offensive is the line of the Narev and Bobr; the attack on that line they precede, however, by an attempt at throwing back the Russian army, which faces them along the line of the lakes, on to the line of the Niemen; the offensive which they direct against it, they mean to carry across the Niemen and the Petrograd-Vilna-Warsaw line; if they succeed in doing this, they will cut off the connexion between the south and the Russian armies round Olita and Kovno. Thus, before trying their thrust against the Narev line, they plan to cut off the arteries which connect it with its northern source of reinforcements and supplies. The field into which they try to drive the retreating Russian army offers several marked advantages to their offensive. Along the lakes the Russians



A SNAPSHOT OF THE GRAND DUKE NICHOLAS.

hold a line parallel to that of the Germans, but if they begin to retreat, their line naturally draws out in length, for their lines of retreat, as marked by the railways and roads of that region, are divergent. The attacking German army comprises eight or nine corps, the opposing Russian forces count but four. The Germans possess, moreover, a marked advantage in means of communication. Heavy snow has fallen in the last days of January and in the first days of February. The Russians stand between Johannisburg and Angerburg at a considerable distance fron their base; they cannot easily and quickly readjust their means of transport to the changes of the season. What fate awaits an army far inferior in numbers, slower in movement, and retreating into a region of forests and marshes along divergent lines? It was only the patient heroism of the Russian peasant-soldier and the resourcefulness and power of initiative of the Russian officer that saved the Tenth Army from the annihilation which the Germans had planned, and which, indeed, they afterwards announced as an accomplished fact.

The Germans had made elaborate preparations to secure the means for a quick advance. A passage occurs in their official *communiqué* of February 20 which seems to suggest that they actually delayed taking the offensive



THE WINTER OPERATIONS IN THE EAST PRUSSIAN ZONE.

until snow had given them a decisive advantage in speed. That possibly explains why their operations in East Prussia did not begin until three weeks after the advance in the Carpathians, and over a week after the culminating period had been reached in the persistent German attempts on the Bzura-Rawka.

"The whole country," says the German *communiqué*, "was covered with extraordinarily deep snow . . . a strong, icy wind had formed in many places tremendous snowdrifts, which hampered very much all communication by rail and road, and rendered perfectly impossible all motor traffic. But the German army command had made careful arrangements to meet these special difficulties of a winter campaign. . . . Thousands of sledges and hundreds of thousands of sledge-runners had been kept in readiness. . . ."

The advance was to begin on February 9. On February 4 the Russians got wind of the extraordinary concentration of German forces, and speedily began to make preparations for retreat. It would have been a matter of absolute impossibility to bring forward from Russia across the snowbound country reinforcements sufficient for resisting the German onslaught along the Mallwischken-Angerburg-Johannisburg line. Hearing of the Russian preparations for retreat the Germans decided to strike at once. On February 7 they started their advance from the southern end of their line, occupied Johannisburg, and pressed on to the west past Biala in the direction of Lyck. It is impossible as yet to gain a clear view of the strategic movements which took place in that region during the following few days, but from some remarks in the official *communiqués* it would seem that the Germans tried to execute a sweeping flanking movement whereby they would have interposed their forces between the retreating Russian army and the line of the Bobr; they also planned to reach the Suvalki-Grodno railway line between Augustovo and the Bobr. To counter this movement against the left flank of their retiring army, the Russians undertook from the direction of Kolno and Osowiec counter-attacks directed against the right flank of the enveloping German army. We do not know the details of these movements nor of the battles which ensued, but we know their result. The southern half of the Russian army in East Prussia—*i.e.*, the 26th Russian and the 3rd Siberian Army Corps—reached the line of the Bobr with losses which did not exceed those suffered by the Germans, and their connexion with Grodno and the Niemen line remained intact.

The campaign developed less favourably for our Allies in the northern portion of their line. The German offensive between Kraupischken and the Niemen began on February 8, the northern wing advancing faster until its front stretched from west to east, and their line of advance ran from north to south. By executing this wheeling movement they compelled the Russians to make their choice between the two possible lines of retreat, on Kovno and Suvalki. On the extreme right wing, the Russian forces (the 3rd Russian Army Corps) fell back in a north-westerly direction towards Kovno. By February 12 the Germans reached the Mariampol-Kalwarja-Wizajny line (mark the salient at Kalwarja), interposing their forces between the 3rd Russian Army Corps and the 20th Army Corps which was retiring in a south-easterly direction towards Suvalki; at the same time the German advance deprived the latter of the use of the Suvalki-Olita railway line which the Germans were now approaching along a front extending over many miles. Had the German movement in the northern district proceeded due east the two Russian corps would have probably reached in safety their base on the Kovno-Grodno line, whereas now the 20th Army Corps under General Bulgakoff found itself pinned on the top of the circular Olita-Grodno railway line, unable to profit from it in any way. It had to retreat into the forests and marshes that extend between Sejny and Augustovo; threatened from all directions by an enemy vastly superior in numbers, it retreated slowly, thus covering by its resistance the right flank of the two Southern Corps. Once the forests were reached which stretch north of Augustovo, the battle dissolved into hundreds of isolated encounters, fought out in the marshy wilderness of the woods or in the secluded clearings round villages which had hardly hitherto realized that in their neighbourhood the greatest war of modern times had been raging for more than six months.

There is nothing in Europe which could be compared with that country, where the virgin forests are called by a name formed from the root of the word "empty." * The impene-

* The Lithuanian Poles call these virgin forests "puszcza" (pronounce "pushtsha"). By the same name are called in Hungary the endless open fields. "Pusty" means "empty."

PRZEMYSL: AUSTRIAN ARTILLERY INSIDE THE FORTRESS BEFORE ITS FALL.

trable thickets of forests are to them the empty world, the world as God had created it before the birth of man. In the land of forests and marshes east of the Vistula, the tribe of Lithuanians had settled in the fifth century of our era never to wander any farther. Then in the Middle Ages the Teutonic Knights, the first armed missionaries of German civilisation, began to spread their dominion from the coasts of the Baltic Sea, the Lithuanian Balta Mare, and set out to carry to the heathens of the forests the blessings of their own type of enlightenment and Christianity. The Russian Lithuanians were exterminated, the Teutonic Knights appropriated to themselves their land and their name; having stolen it, they and their descendants subsequently dishonoured it for all times. Marienburg was their stronghold, it is now the favourite castle and spiritual home of the Kaiser; from here he expounded to the world a few years before the war his conception of the divine mission of the House Hohenzollern. Seven centuries ago the Teutonic Knights conquered the lands along the sea, but they found the forests and marshes that surround the Niemen an impassable barrier to their farther advance. The same was to be the experience of their descendants in our own days.

In pursuit of the retreating 20th Russian Army Corps the Germans entered the forests of Suvalki and Augustovo. There they stopped "to collect the rich booty." Many of these busy collectors have never been heard of since, and the world is no poorer for it. On the other hand, many battalions of that 20th Russian Army Corps, most of which was given up for lost, afterwards rejoined the Russian Army. When its counter-offensive reached the outskirts of the big forests, these scattered detachments began to emerge from them. On February 23 the advancing Russian Army was joined by the 29th Division, which had formed part of the 20th Army Corps. In twelve days it had crossed, through deep snow, sixty miles of pathless forests, fighting many battles. During the following days smaller detachments from General Bulgakoff's corps met the advancing Russian forces at Sopockin, Jastrzemba, Lipsk, and Shtabin.

Whilst the Tenth Army was falling back on to the line of the Niemen and Bobr, reinforcements were gathering behind these rivers. The Germans never accomplished the task which they had set themselves. Three-fourths of

AUSTRIANS LEAVING PRZEMYSL.

Baron Sievers's army remained intact, and only between Swientojansk and Gozha (about 10 miles north of Grodno) did the Germans reach the Niemen; one detachment of German infantry even succeeded in crossing the river (on February 24), but made no headway, and never got near its objective, the Vilna-Warsaw railway. On February 25 it was driven back to the left bank.

About February 21 began the Russian counter-offensive along a line extending for more than a hundred miles, from Plonsk (north of Novo-Georgievsk), by Ostrolenka, Lomza, Osowiec to Grodno. During the following week they advanced along the entire front a distance varying from three to eleven miles. During this new phase of the East-Prussian campaign the northern district—*i.e.*, the sector between Kovno and Grodno loses in importance. The German Army which had advanced against the Kovno-Olita line, finding operations in that district most "unprofitable," retired in the first days of March through the valley of the Sheshuppa, by Pilvishki and Mariampol, towards the Prussian frontier. General von Eichhorn's army was met by the Russian counter-offensive on the line Simno-Seree-Vietsieie-Koptsiovo-Sopotskin, and further south along the Bobr. On February 27 the Russians captured Hill 1,005 between Gozha and Sopotskin; that hill commands practically the entire region of operations round Grodno. "In this affair," says the Russian official *communiqué* of March 8, "we captured 1,000 prisoners, 6 cannons, 8 machine guns. The hill was defended by the 21st German Army Corps, their best corps, which lost during the fight from twelve to fifteen thousand killed, judging by the dead who were abandoned." This battle marked the final defeat of the German advance within the semicircle of the Grodno-Suvalki-Olita railway line. Throughout March the Russians made steady progress. In the south they reached Augustovo on March 9, further to the north they compelled the Germans to evacuate Lodzie on March 19. Threatened by envelopment, the Germans had to fall back also in the centre. Before the end of March the Russians had retaken Seyny. These operations were, however, by now merely of secondary importance. The Germans could no longer hope to break through towards the Niemen, still less, then, to acquire a hold on any part of the Vilna-Warsaw railway line. The Russians, on the other hand, continued in that region a very profitable, slow war of attrition. From about February 24 the centre of gravity had shifted to the sector of the Russian "barrier" which faces the southern edge of East Prussia; the chief fighting developed during the next fortnight on the Bobr-Narev line round and beyond Osowiec—*i.e.*, in the region where the Germans had hoped to meet with their "crowning mercy."

PRZEMYSL: THE AUSTRIAN CHIEF OF STAFF (on left).

Considering the enormous concentration of German forces in East Prussia, the Russians found it advisable in the beginning of February to fall back on to their line of defence along the entire front; they withdrew from the advanced positions, even on the Lower Vistula. On February 15 they still hold Mochovo, between Sierpiec and Dobrzyn; the next day they fall back on the Plock Raciaz line. Under date of February 18 we hear of fighting near Plonsk, only seventeen miles to the north-west from the fortress of Novo-Georgievsk. That region between the Lower Vistula, the East Prussian frontier, and the Mlava-Novo-Georgievsk railway is, as we have previously pointed out, of secondary strategical importance. Its possession could be of no particular value to the Russians except for an attack against East Prussia from the south, otherwise its occupation would have led merely to a dispersion of forces, and in case of a successful German offensive in the Prasnysz-Ciechanow region the advanced detachments round Sierpiec might easily have found themselves cut off from the main forces round Novo-Georgievsk.

Much less marked was the retreat to the east of Prasnysz. The country offers good ground for defence; most of it is hilly, some points rising even above the 1,000 ft. contour-line. Its broken sand-hills are covered with patches of wood; the rivers wind through marshy valleys. The general conformation of the ground, coupled with the complete absence of railways between the Narev and the Prussian frontier and the scarcity of high roads, renders that region unfavourable for offensive movements on a great scale. That is the reason why we hardly ever hear of any German advance in force through the district between the river Orzec and the Grajevo-Osowiec railway line. They have always kept close to the two railway lines, which we might consider the eastern and the western border of the Prasnysz-Lomza region—namely, the Mlava-Novo-Georgievsk and the Grajevo-Osowiec line. East of Osowiec the country resembles much more the district of Augustovo; it is flat and is covered with swamps and forests.

During the general retreat which took place at the beginning of February the Russians were compelled to fall back on to the line of the Bobr. It was a moment of considerable danger. The chief defence of that line, the great marshes on the northern bank of the river, had vanished with the advent of cold weather. Would the fortress of Osowiec be able in these circumstances to offer effective resistance? There are certain marked advantages which it possesses in all seasons. Along the left bank of the Bobr runs a long ridge covered with woods. The Russian artillery obtains from that elevation an excellent field of fire, the wood and the broken surface of the ridge offer it good cover, whilst it is most difficult to find any cover for artillery on the opposite bank. So much for Osowiec itself; yet all its natural advantages would have been of no avail, could the Germans have turned its position by crossing the Bobr to the north-east of Osowiec, where the marshes are practically its only defence. The Germans, before settling down to frontal attacks against the fortress, seem to have attempted that turning movement. On February 18—*i.e.*, only four days after the evacuation of Lyck—we hear of fierce fighting on the Bobr, round Sucha Vola, about twelve miles above Osowiec. But it is here that the Russian concentration is strongest and that their counter-offensive begins earliest. They do not advance from Osowiec, but on both flanks of the fortress. Having been foiled in their attempt at turning Osowiec, the Germans draw together their forces on both sides of the railway line and entrench themselves

in front of the fortress. The fighting in the sector of Osowiec loses in importance, and henceforth all interest centres round the artillery duel which proceeds between the fortress and the German batteries. General von Below, the much-praised hero of Lyck, is in command of the German Army in this region. He has decided not to try any more fighting in the open country, but rather to force the chief road across the Bobr by bringing into action the German siege artillery which had achieved such extraordinary results before Namur, Maubeuge and Antwerp. We hear that on February 26 the Germans were bombarding Osowiec with 11-inch and 12-inch mortars, and even with the huge 42 cm. howitzers. But their fire seems to have made no impression on the forts of Osowiec. "Russian concrete is very solid," says the Petrograd official *communiqué* of February 27. The remark sounds like a joke, and need not be taken too seriously. The most likely explanation why the "concrete" of Osowiec proved by so much stronger than that of Antwerp or Maubeuge is that it probably never was hit by the German artillery. Unless the Germans were able to make effective use of aeroplanes—and we do not hear anything about their activity during the siege of Osowiec—they had but very poor opportunities for finding the range of the forts or for exploring the positions of the temporary emplacements. The guns of Osowiec were able to silence several German batteries without suffering themselves from their fire. The Germans were compelled to move their positions fairly frequently, as none could remain hidden from the Russians very long; these could easily survey the plain on the right bank of the Bobr from the ridge, which is several hundred feet high. In the case of the 42-cm. guns, moving is a most elaborate and lengthy process; on one occasion it gave rise to rumours that these guns had been withdrawn. In reality, the bombardment by the 42-cm. howitzers was soon resumed, but with no better effect than before. German newspapers throughout the period have little to say about Osowiec.

Only fighting of very secondary importance occurred during the second half of February in the district north of Lomza and Ostrolenka. The chief German attempt to advance in that region was directed along the Kolno-Lomza

PRZEMYSL: AUSTRIAN RED CROSS OFFICERS LEAVING THE TOWN.

PRZEMYSL: HALF-STARVED AUSTRIAN SOLDIERS.

road, and it failed. Even that movement does not seem to have been executed by any considerable forces; as was explained above, the ground is unfavourable to offensive action on a large scale. The attempted advance in the valleys of the Omulec and the Rozoga was probably subsidiary to the chief advance against Prasnysz; it was meant to cover the eastern flank of the latter, to bind the Russian forces round Ostrolenka, and thus to divert attention from the main movement. It seems doubtful whether it ever aimed at any independent objective of its own.

Prasnysz was now, as it had been in December, the objective of the German advance towards the Narev. This region resembles in configuration the country round Plock and Sierpiec rather than the typical landscape about Lomza. It is fairly open and does not offer much cover. More roads cross it than are to be discovered anywhere further to the east. Prasnysz is the centre of these roads. One road leads from Prasnysz to Mlava, another to Ciechanow, a third by Makow and Pultusk to the fortress of Sierock. By taking Prasnysz the Germans would have acquired a considerable hold on the district west of the river Orzec, they would have carried their offensive to the gates of Novo-Georgievsk and Sierock, and they would have acquired a front line parallel to the railway which leads from Radimir to Ostrolenka.

About the middle of February two German army corps were concentrated on the Mlava-Willenberg line. Their advance in force against Prasnysz began on February 20. The Russian forces in that region were very inconsiderable; they consisted of only one brigade of infantry and of some small bodies of cavalry. By a wide turning movement, which passed east of Prasnysz, the Germans totally outflanked the Russian position until they had surrounded it practically from all sides. Meantime, the 36th German Division was detached to guard the passages of the river Orzec and thus to prevent any interference from the east with the German operations round Prasnysz. On February 25 the Russians were attacked simultaneously from the north and the south. They had to evacuate Prasnysz, and there seemed but little hope of their escaping complete destruction. But relief came just in time. The German forces on the Orzec were unable to prevent the Russian reinforcements coming from Ostrolenka, from crossing the river; they were practically annihilated in the battle of Krasnosielec. The Germans who had surrounded Prasnysz from the south were in turn enveloped. A confused and most desperate battle ensued on February 26 and 27. On the 28th the Germans began to retreat towards Mlava and Chorzele, leaving about ten thousand prisoners in the hands of the Russians. Following up their victory, our Allies again reached Mlava. But soon they had to meet a new German offensive. Eight to ten German army corps are said to have been gathered on the Willenberg-Soldau line for a new attack on Prasnysz. The figure seems, no doubt, to be a fantastic exaggeration. The Germans again advanced, this time securing their movement by parallel progress in the valleys of the Orzec and Omulec. We hear again of fighting along the entire front about the middle of March, but nothing happens during the next fortnight which would bear out the rumours which had previously gained credence about a new German concentration against Prasnysz of unprecedented size.

The German winter campaign in East Prussia, which at first seemed to offer unusually good chances of success, fizzled out, after the

PRZEMYSL: THE DESTRUCTION OF THESE BRIDGES PREVENTED FOOD FROM REACHING THE GARRISON.

marked success of the first week, in incongruous and practically aimless fighting. The rally for the attack on Prasnysz—*i.e.*, the second part of the original programme—ended in a German defeat. It seems very doubtful whether a comparison of the losses suffered during the entire campaign would give any advantage in favour of the Germans.

The strength of the Russian "barrier" on the right bank of the Vistula was tested once more and proved equal to its task, and Osowiec succeeded in withstanding attacks such as no Western fortress had as yet survived.

On Monday, March 22, at nine o'clock in the morning, fell Przemysl, the chief fortress of the Austro-Hungarian Empire and one of the greatest fortresses of Europe. Its fall involved the surrender of a garrison consisting of nine generals, ninety-three superior officers, 2,500 subaltern officers and officials, and 117,000 of the rank and file. A whole army was lost to the Germanic Allies, an army equipped with a powerful train of artillery, including a considerable number of guns of the most modern type. The forces within Przemysl exceeded by far the number required for an effective defence of the fortress. Their original strength must have amounted to about four army corps, when after a siege of four months and after a series of most desperate sorties, 120,000 men still remained in the fortress. A garrison of sixty thousand would have been amply sufficient for the defence of Przemysl; the greater number merely hastened 'the evil day' of surrender. The excessive size of the garrison and the deficiency

PRZEMYSL: RUSSIAN INFANTRY ENTERING THE BARRACKS.
Notices in Russian will be seen on the gateposts.

A MOTOR SCOUT PATROL.

of supplies were both due to the same cause—the unexpected turn in the course of the war which set in towards the end of October, 1914.

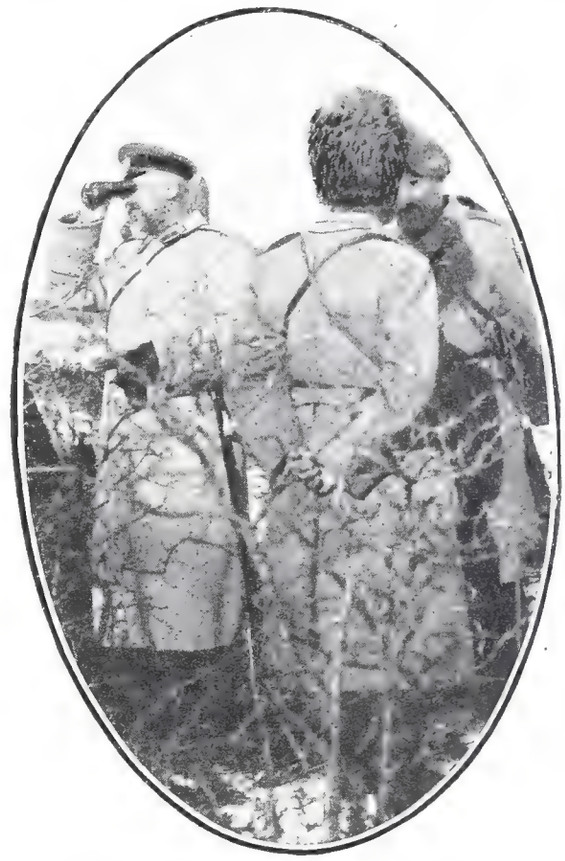
The first siege of Przemysl had begun on September 16, and was raised on October 14. The Russian troops fell back before the Austro-German forces on to the line Medyka-Stary Sambor. Their retreat was effected in perfect order, and before retiring they blew up the bridges and destroyed large tracks of the railway and the roads. It was not until October 23 that the first train from the west entered Przemysl. During that period the Austro-German armies operating on the San seem to have been supplementing their supplies by drawing on the stores of Przemysl. An eminent Austrian general explained, in a recent discussion on the different uses of fortresses in modern warfare, that in border-lands they form useful and safe depôts of supplies, ammunition, and rolling-stock for the armies operating or gathering in their neighbourhood. That view seems to have been put into practice to the great detriment of the future staying powers of the fortress. The drafts on the stores had hardly been replaced when the Austro-German armies found themselves compelled to fall back to the west. That retreat seems to have taken place in such a hurry that considerable bodies of troops which did not belong to the garrison sought refuge in the fortress from envelopment by the Russians. This is the most likely explanation of the excessive size of the garrison during the second siege of Przemysl.

The second siege of Przemysl began on November 12. Experience at Port Arthur had taught the Russians many a lesson concerning modern fortresses. They did not try to take

GERMAN LANCERS RETURNING FROM OUTPOST DUTY.

Przemysl by storm. With the inadequate siege-artillery which the Russians had at their disposal, any attempt on their part to rush the forts or trenches of Przemysl would have been infinitely difficult and expensive. For years the best Austrian engineers had been preparing the field of fire; the Austrian artillery knew the exact range of every point round the fortress. No cover was left which would have favoured the advance of the enemy. At night powerful searchlights excluded all possibility of a surprise attack. The Russian siege-army, commanded by General Selivanoff, proceeded first of all to construct a series of defence works of its own. Przemysl, a fortress with a circumference of twenty-five miles, was surrounded by an outer ring of Russian counter-fortifications. These positions were fortified so as to offer an effective resistance to any attempts on the part of the garrison to break through the surrounding Russian lines. The problems involved in the siege of a modern fortress, which cannot be shattered by artillery fire or taken by storm, resemble to some extent those of preventing an enemy from crossing a river. It is impossible to guard the entire line in sufficient force to defeat any attempts on the part of the enemy. The most that can be done is to hold in force the most important points and to fortify the rest of the line to such an extent that the local forces should be able to hold it until supports can be brought up from other parts of the line. Whilst the ring round Przemysl was being fortified all the time, the Russian troops were approaching its forts by means of saps; that was slow and weary work, but it was sure to be more efficacious than any direct attacks could have been, and caused infinitely smaller losses of life among the besieging army.

The garrison of Przemysl was excessive in size, the stores could not last long. These facts were known to the Russians, and thus they had no reason to waste men on storming a fortress which could be starved into surrender. The Austrians had to assume the initiative in attacking. They had enough men to spare, and they freely sacrificed lives in desperate sorties. The commander-in-chief of Przemysl was General Hermann von Kusmanek, but a special "expeditionary force" was formed for sorties; it was mainly composed of Magyars, and a Magyar, General Arpad von Tamassy, was placed at its head. A few sorties were undertaken in November. They assumed a really serious character about the middle of December, when the Austro-German armies were pouring across the Carpathians into Galicia, and had got as far as the transversal railway line between Krosno and Sanok. Six sorties in considerable force issued from Przemysl between December 11 and December 22. On one occasion "their sortie detachments striking at one point of the lines of investment broke through and succeeded in marching 15 miles beyond the outer lines of the Przemysl forts." "Only those then present with the staff of the besieging army," says an officer of General



RUSSIAN OFFICERS MAKING OBSERVATIONS.

Selivanoff's staff in an account of the siege, written for *The Times* at the request of its special correspondent with the Russian forces, "could realize what strenuous work devolved upon them during this trying period of the siege. The Austrians in the fortress were already conversing with the Austrians on the Carpathians by means of their searchlights. The guns of Przemysl could be heard by the Austrian field artillery. The situation was serious, and General Selivanoff took prompt measures. He brought up fresh troops to the point of danger and drove the sortie detachments back to the fortress. . . ."

During January and February comparative

ADMISSION TO THE ENEMY'S LINES.
A Russian soldier, bearing a message for Austrian Headquarters, being blindfolded.

calm prevailed in the sector of Przemysl. The Germanic armies were trying to relieve Przemysl by attacks on the lines of communication of the besieging Russian forces. No Austro-German forces stood anywhere near Przemysl, and so there was little hope or scope for sorties; meantime, the Russian ring was drawing tighter and tighter round the fortress.

The Austro-German chief command knew of the approaching exhaustion of supplies in Przemysl; fairly regular communications were kept up between them and the besieged fortress by means of aeroplanes. In the beginning of March a new desperate Germanic offensive was undertaken across the Carpathians straight against Przemysl, but this time it did not get beyond Baligrod and Lutoviska. Towards the middle of the month the garrison began to fire off ammunition simply on an offchance that it might hit some Russians. The hour of surrender was evidently near at hand. Says a dispatch from the Russian Great General Staff, received at Petrograd on March 18: "In the Przemysl sector the fortress guns continue to fire more than a thousand heavy projectiles daily, but our troops besieging the fortress lose only about ten men every day."

On the same day General von Kusmanek issued an order to the troops of Przemysl, calling on them to proceed to a last sortie. "Heroes, I announce to you my last summons. The honour of our Army and our country demands it. I shall lead you to pierce with your points of steel the iron circles of the enemy, and then march on, ever further, without sparing your efforts, until we rejoin our army, which, after hard fighting, is now near us. . . ." It is not known with certainty how the summons was received by the garrison, but well-founded rumours are current that the starved Slav regiments, which never had their hearts in fighting for the cause of their bitter enemies the Germans and the Magyars, re-

UNDER THE FLAG OF TRUCE.
A blindfolded Russian soldier being conveyed to Austrian Headquarters in a motor car under guard.

IN THE CARPATHIANS.

The Grand Duke Michael Alexandrovitch, only brother of the Tsar, is in the centre of the group, which includes some of the Caucasian princes.

fused obedience. Anyhow, so much is certain that the sortie of March 18 was undertaken only by the Twenty-Third Hungarian Honvéd Division, supported by a Landwehr Brigade and a regiment of Hussars ; further that it was not directed towards the distant Carpathian Mountains, where Austro-German armies were fighting, but to the east, towards Mosciska ; the Austrian commander thought that the Russians had there their stores of provisions. In other words, the Anabasis of the modern Xenophon assumed the character of a foraging raid, and it finished in complete disaster. During the night Sunday—Monday (March 21–22) the garrison blew up the main forts, and at nine o'clock in the morning the fortress formally surrendered to the Russian Army.

The fall of Przemysl rendered available for further operations in the Carpathians a Russian army more than 100,000 men strong ; and what meant still more, it secured for the Russians full freedom in using the excellent system of railways and roads which covers the quadrangle between Lwow, Stryj, Jaslo and Rzeszow.

In reality Przemysl never fully performed the functions which its designers had expected it to fulfil. Conditions had changed considerably since the days when it was chosen for the site of the greatest Austrian fortress. The idea of building a fortress on the San was first discussed during the Crimean War. The first fortifications round its bridge-head were constructed in 1865, the first forts were built in the years 1871–1873. The fortress was reconstructed and enlarged about 1887, when a war between Austria and Russia seemed imminent. It was again rebuilt in 1896. Then a long time of comparative rest followed in the matter of Austrian preparations for war against Russia. In 1897 an agreement was concluded between the two States concerning Balkan affairs, and no matters of acute controversy arose between them until Count Aehrenthal, the Austrian Foreign Secretary, by his high-handed behaviour towards the Serbian nation, threw down a challenge to the Slav world. In 1909 began the last and most modern reconstruction of Przemysl.

A look at the map easily explains the reasons why Przemysl was chosen for the site of the chief Austrian fortress against Russia. Here the great rampart of the foothills which stretch in front of the Western Carpathians approaches nearest to the river-belt of the Dniester. The mountain wall is still further strengthened by the river San. Inside the great curve of the San, between Przemysl and Jaroslav, the hills rise to a height of 1,400 feet. They cover the western and southern flanks of the fortress ; the San affords it protection from the north. To the east stretches a level plain ; Przemysl overlooks it from its heights. Further to the east the marshes along the Wisznia and still further the ponds and marshes round Jaworow and Grodek reinforce the defensive lines in front of the fortress. Przemysl itself guards the gap between the hills and the San in the west and the upper Dniester in the east.

To the east of Sambor the Dniester forms an enormous marsh. For about forty miles no roads nor railways cross it ; they merely skirt its mighty triangle between Sambor, Lwow and Stryj. One part of it bears the name of "Big

TRUDGING THROUGH THE SNOW.
Last line of Austrian reserves marching to join the advance armies.

Mud" ; the names of the towns and villages scattered along its fringes hint at the presence of midges and different water-fowl. The marshes continue, though over a much narrower belt, between Mikolajow and Zuravno. Between Zuravno and Nizniow the Dniester can be crossed comparatively easily, and this was the one region which would have had to be held if Przemysl was to serve as buckle between the covering lines of the Vistula, the western hills, the San and the Dniester. For below Nizniow the Dniester again forms a good defensive line. The river winds in mighty curves through a cañon several hundred feet deep. Its steep sides are covered with forests ; these forests stretch across the broad belt formed by the curve of the river, and also across the lower reaches of its tributaries. The "yary" (cañons) of Southern Podolia form the "dead belt" of the lower Dniester.

When Przemysl was first constructed, offensive warfare against Russia was hardly thought of by anyone in Austria. In those days the plans were laid for defence. In case of war with Russia, everything to the north-east of the San-Dniester line was to be abandoned, the line of the rivers was to be held in force. The fortress of Cracow in the narrow gate between the Vistula and the mountains was meant to guard the road to the west ; Przemysl, between the two river-wings, was to act as first defence. Moreover, it was to cover the best roads and easiest passes leading into Hungary (the Uzsok, Lupkow and Dukla).

In recent years Austrian strategic plans underwent considerable changes. Eastern Galicia was covered with a network of strategic railways, the offensive against Russia between the Vistula and the Bug became the absorbing idea of Austrian strategists. The defensive plan was practically abandoned. Przemysl remained an isolated fortress in these days, when only lines of fortresses can be of real use as supports to field armies. The first Russian offensive swept over the Dniester at Halicz and over the San at Jaroslav. Przemysl was never anything more than an inconvenience to the advancing Russian army.

CHAPTER LXX.

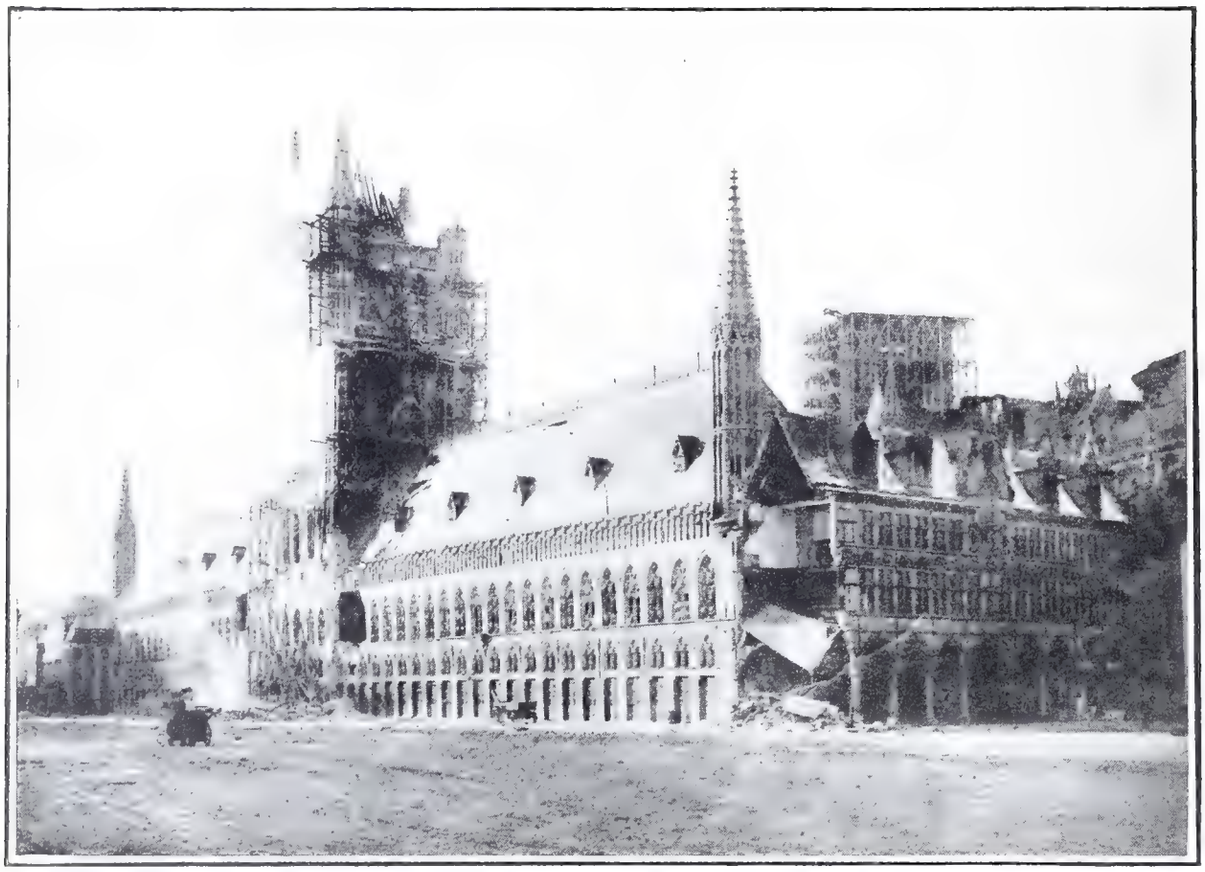
WINTER ON THE WESTERN FRONT.

THE FIGHTING FROM THE BATTLE OF YPRES ONWARD.—THE TOWN OF YPRES, ITS BEAUTIES AND THEIR DESTRUCTION—THE COMBATS OF VERMELLES—ON THE YSER—AT WYTSCHAETE—GIVENCHY—CHRISTMAS IN THE TRENCHES—THE ENGAGEMENT AT ST. GEORGES—THE BATTLE OF SOISSONS—THE FIGHTING ROUND LA BASSÉE AND NEAR BETHUNE—STORMING THE GRANDE DUNE—THE COMBATS ON THE YPRES-COMINES CANAL.

CHAPTER LXV. recorded the mighty struggle which will stand out for all time in the history of the Great War as one of the most important and deadly actions of the Western campaign—the first battle of Ypres. That battle ended with the complete repulse on November 11, 1914, of the famous Prussian Guard, fifteen of whose battalions had been brought up to batter the British and French Armies, destroy their thinned and tired remnants, and open the road to Calais. But the Kaiser's intended culminating stroke fell almost harmless; for the valour and magnificent endurance of the "contemptible little army," aided by the efforts of its gallant Allies, turned it aside. The end of this act of the bloody drama was, indeed, far different from that which its Royal author had intended. To be crowned King of the Belgians in the city of Ypres was impossible; he could only show his baffled spite by a savage bombardment from a safe distance of its beautiful cathedral and the world-renowned Cloth Hall. The destruction of Dover from the cliffs of Calais had to be replaced by ineffective strokes against harmless coast towns, where a few bombs killed a number of innocent women and children, but produced little material and no moral effect on the inhabitants of England.

Thereafter followed a period for both sides of comparative quiescence—almost a time of rest so far as great and spectacular efforts were concerned; but their winter quarters were far different from what they used to signify in former wars. Then there was practically a total cessation of hostilities; now, though no supreme efforts were made, winter in the trenches signalized an epoch of almost uninterrupted fighting. There was perpetual vigilance against attack; the daily rebuilding of trench works shattered by artillery fire, the replacement of wearied units by less wearied, while new men took the place of the killed and wounded. It was a time of continuous hardship and trial, and all in the trenches of France and Flanders through the Winter of 1914–5 hoped for the coming of Spring, even though the change from darkness and cold mud and numbing inactivity meant a renewal on a greater, and probably a bloodier, scale of the continued battles of the past autumn.

But while the four months which elapsed between the first battle of Ypres in November and the battle of Neuve Chapelle in March marked a period which was barren of those noteworthy engagements which are the substance of military history, though they will fill but a



THE CLOTH HALL OF YPRES FIRED BY GERMAN SHELLS.

short page in the school-book history of the future, they represent nevertheless an era in the War which is replete with profoundly interesting and important material for the military historian's study; and they afford matter of no less interest to the general student of the different phases of this epic warfare. There was fighting—and heavy fighting—to record during this winter period, and interesting events which varied the daily and nightly round of watching in the mud of the trenches. It is this strange but often moving tale of winter life in the trenches which we have mainly to tell in this chapter.

We have spoken of the first battle of Ypres as having ended with the defeat of the Prussian Guard on the night of November 11, for that was the end of the abortive German stroke. The definite abandonment for the time of the struggle to hack through to Calais is, however, more usually dated November 20, for the fighting only gradually died down after the 11th. By the 20th, however—the day when the weary British troops were relieved by the French—the indications that the attack had really spent itself were displayed with clearness sufficient to justify Sir John French in writing, in his despatch of that date (reviewing the fighting since the beginning of October), "As I close this despatch there are signs in evidence that we are possibly in the last stages of the battle of Ypres-Armentières." Cautious in language, of course, but significant, and borne out by the event.

And, indeed, there was fighting enough during those intermediate days to make a record of very real warfare. True, the Germans failed to push home their advance in front of Ypres, which they should have done on November 12—a plain proof that for a time their troops were spent; but in other parts of the line they were not idle; north of Ypres they crossed the canal at two points (to be thrown back the next day), and they gained some ground to the south of Ypres, which was afterwards retaken. The afternoon of Friday, the 13th, witnessed a fierce bombardment of the section of the British line which ran south to the Menin-Ypres road—which formed the prelude to an attack along the whole line round Ypres. This attack, which at one point succeeded for a time in penetrating our trenches, resulted in heavy losses to both sides, exceptionally so on the German side. On the night succeeding that day, too, the British took the offensive, captured a German trench, and

bayoneted such of its occupants as did not surrender. A similar story of attack by the Germans south of the Ypres-Menin road, with penetration of our lines, marked Saturday, the 14th. This was a better day for the French, who attacked successfully and gained ground near Wytschaete. Elsewhere the Germans were busy on this day, as on the previous day, in shelling towns, villages and roads behind our lines, evidently deeming it desirable to discourage the advent of reinforcements.

Among the towns thus favoured was Ypres itself, and in so far as the bombardment there was to check the reinforcement of our line it was legitimate warfare. But it soon became apparent that the wanton fury of disappointment was the chief motive which pointed the German guns. So long as they saw a prospect of a dramatic triumph for the Kaiser among the mediæval beauties of the Flemish city the Germans spared, as far as possible, the Cloth Hall and the Cathedral, and they did not send incendiary shells into it. As hope vanished incendiary shells began to be used, and they were especially directed upon the city's glorious monuments. This vandalism (to anticipate a few days) was particularly noticeable on November 22 and 23, when the Germans poured a stream of shell into the market square, having, it is said, brought up for the purpose a train armed with heavy guns, used under the direction of a captive balloon. It was then that the Cloth Hall and the Cathedral were set ablaze, and when they were seen to be demolished the German artillery ceased shelling that quarter.

In the thirteenth century Ypres had been the wealthiest town of Flanders; its population was estimated at 200,000. Out of the profits acquired from the constant activity of 4,000 looms its citizens between 1200 and 1304 had created the three-storied Cloth Hall, which was the finest municipal building of the Middle Ages in Belgium. The main façade was 433 feet long. From its centre sprang the square belfry 230 feet high, and one side of the vast building was flanked by the Nieuwerk, a beautiful Renaissance erection of the seventeenth century. As Mr. Souttar has well remarked, the only building which we have at all comparable to the Cloth Hall is the Palace of Westminster.

The interior of the Hall, whose upper storey consisted of three huge galleries with timber ceilings, was decorated in places by mural paintings, some dating from the fourteenth and fifteenth centuries. During the last fifty years the walls had been embellished with frescoes from the brush of distinguished

A WINTER SCENE.

THE LAST PORTRAIT OF LORD ROBERTS.

artists belonging to the modern Belgian school. These painters—Guffens, Swerts, Pauwels, Delbeke—had depicted the chief events in the rise and decline of Ypres, which by 1914 contained a population of under 20,000. The foundation of the Hospital of the Virgin in 1187, the ravages of the Black Death in 1347 which had led to the decay of the cloth industry of Ypres, the siege of the city by the English under Henry Spencer, the fighting Bishop of Norwich, and by the burghers of Ghent and Bruges in 1383, the entry of Philip the Bold of Burgundy and his wife, the last Countess of Flanders, in 1384 were among the themes treated. Delbeke's allegorical paintings, representing the manufacture of cloth, exhibited his personal and curious talent. Since their destruction all that is left of this rare painter who held so high a place in the artistic annals of his country are a few sketches and small easel pictures.

To the north of the Hall was the Church of St. Martin, built in the thirteenth century. The unfinished tower, 190 feet high, the rose window of the south transept with its magnificent stained glass, the triumphal arch between the pillars of the west porch, which had been constructed in 1600 by Urban Taillebert, the choir-stalls carved by the same Urban Taillebert, the pulpit with its lavish carving, the late-Gothic monument erected to the memory of Louise de Laye, widow of Hugonet, Chancellor of Burgundy, the tomb of Antoine de Henin, the brazen screen in the south aisle with its alabaster statuettes of saints attracted visitors to this noble church. To students of religious history St. Martin's was especially noteworthy. Under a plain flat stone was buried in it Cornelius Jansenius, Bishop of Ypres. During the seventeenth and eighteenth centuries the followers of Jansenius, of whom the most illustrious was Pascal, had disputed with the Jesuits for the souls of the French and their Bourbon rulers.

From the Grand Place and the Hall ran southwards a wide street, the Rue de Lille. Some doors down on the west side was the Hospice Belle, an asylum for old women, founded by Christine de Guines, widow of Salomon Belle, about 1279. It was the shrine, as it were, of a triptych-painting by Melchoir Broederlam of Ypres, who had been employed by Philip the Bold at the end of the fourteenth century. Broederlam was a predecessor of the Van Eycks, and he was one of the earliest painters north of the Alps of whom we possess any record. The crowned Virgin, clothed in the red and gold brocade of the period, and the St. George with a medieval lance in his hand, the portraits of Salomon Belle and his sons, of Christine de Guines and her daughters carried one back to the years which had followed the completion of the Hall and seen the gradual collapse of the city-state of Ypres. Further along the Rue de Lille was the Hôtel

LEAVING FRANCE FOR HOME.

Merghelynck, a Museum illustrating the taste of the eighteenth century in furniture, china and knick-knacks. Almost opposite it was a Gothic edifice, the Steenen, which had been converted into a post office.

The Rue de Lille was but one of the numerous thoroughfares of Ypres which delighted the historian, artist and antiquary. The splendid houses, from the Maison de Bois with its tasteful Gothic timber front to the dwellings built during the eighteenth century, exhibited the evolution of domestic architecture. The towers and gables reflected in the stagnant waters of the ditches and ponds fed by the sluggish Yperlee dominated the remains of the old ramparts, dismantled in 1855.

Ypres was a city of the past. The weavers, whose "red-coated" ancestors with the burghers of Bruges and Ghent had in 1302—thirteen years before the Swiss at Morgarten inflicted their first defeat on the Hapsburg knights—routed the feudal chivalry of France

THE PROCESSION TO THE PORT.

at the Battle of Courtrai, had migrated in the latter half of the fifteenth century. The town had been devastated by religious iconoclasts in 1566; immediately afterwards it had been pillaged by the ferocious soldiers of Alva and Parma; four times it had been taken by the French in the seventeenth century. This Winchester of the Low Countries was now added to the list of cities the ruins of which will attest to posterity the character of the German people and its rulers. "Alexander the Great," said Voltaire, "founded more cities in Asia than the other conquerors of that continent have destroyed." William II. will be remembered, not for the towns which he founded in Europe, but for those which he reduced to ashes.

To return to our narrative of these final days of the battle. Sunday, the 15th, saw a very distinct slackening in the enemy's efforts, though on our side it was marked by a retaking of the remainder of the positions lost the day before. A German prisoner declared that this day had been fixed for a renewed assault by the enemy, but that the heavy nature of the previous day's losses had determined them to await reinforcements; and on Monday, the 16th, this section of the front relapsed into a peace it had not known for a month. Then on the 17th there was another and last spurt, made chiefly by the XV. Corps. Three attacks were delivered to the east and south-east of Ypres, and the first attack met with such success as can be claimed for the occupation of trenches out of which our troops had been previously driven by shell fire. But the gain was a very short-lived one; a brilliant counter-stroke with the bayonet sent the Germans scuttling out and back 500 yards to the rear. The second attempt ended in their leaving 1,200 dead outside a length of 500 yards of the British front; and the third was soon repulsed by shell fire. These abortive efforts may be regarded as the final flicker of the mighty attempt to push through to Calais; though, a day or two later, German activity on our left wing seemed to indicate a further attempt to reach the desired goal by the coast road. But this, too, flickered out.

The succeeding days passed uneventfully. But in using the word let us avoid any misconception upon the reader's part as to its meaning, by quoting from one of "Eye Witness's" dispatches, dealing with the same period. "What is now considered uneventful," he writes, "is not so in the peace sense of the word. It merely signified that no active operation of any special vigour by either side has stood out from the background of artillery bombardment. This continues day and night

IN NORTHERN FRANCE.
Members of the German Red Cross with rifles.

may glance at the map (page 219) and note the line of the opposing armies on the Western front. In the north the Franco-British line began on the Belgian coast at Nieuport and St. Georges, which they held. Here the Yser ran into the sea, and as far south as Dixmude (which is divided by the river and was between the contending armies) formed roughly the boundary between the opposing lines and covered the small corner of Belgium which alone remained free of German occupation. This section of the line was appropriately defended by the Belgian army.

From Dixmude the line continued in an irregular southward and south-easterly course, the Ypres salient, still in British hands, marking one of the most noteworthy features of the irregularity. From Armentières it bent away in a westward curve towards Béthune, somewhat straighter opposite La Bassée, where the British front ended. Thence the long line to the Swiss frontier was exclusively French. It ran at first nearly due south, past Arras and La Boiselle (in French hands), beginning its eastward curve at Quesnoy. Thence across the Oise, between Noyon and Compiègne (nearer the former), where the Germans got closest to Paris, and away to Soissons, following the Aisne to Berry-au-Bac. Thence it took a south-easterly curve past Reims, and away eastward through the Forest of Argonne to the Meuse. Here there is a big curve around the fortress of Verdun, which ends in a German salient at St. Mihiel. From this point the line stretched out towards the Lorraine frontier by Pont à Mousson, and skirted the frontier, until, by the Col du Bonhomme, south of St. Dié, it actually crossed into the enemy's country, and restored a slice of German territory in Alsace to France. The long line of 350 miles ended by the Swiss frontier, below Altkirch.

The daily and nightly fighting, on one part or another of that line, swelling here and there into important engagements, shifted the demarkation by a few hundred yards from time to time, but, speaking broadly, it remained as we have just sketched it throughout the winter —as stationary as it was invisible, for it was a line of soldiers hidden in the earth.

It was not a pleasing prospect before our soldiers in those November days. Miseries of the kind which they were destined to undergo are not easily realised in advance, and the wonderfully cheerful men of the British Army did not spend time in gloomy contemplation of what lay in store for them. But a foretaste came early. Even before the deafening echoes of the Ypres battle had died down, snow had started to fall and melt into miserable slush; and the roads, already made bad enough by rain and heavy traffic, became avenues of depressing filth, only surpassed in wretchedness by the trenches themselves. These were, as we are told, "wretched beyond description; from having to sit or stand in a mixture of liquid mud, the men had now to contend with half-frozen slush." Some relief to this gloom was afforded by a welcome visit to the British lines of the King, but before referring to this Royal visit we may briefly chronicle one or two intermediate matters.

A SHELTER.

It has been noted that on November 20 the British troops in the Ypres region were relieved by the French, and trenches which had been held so bravely and at such cost for a month previously were handed over to our Allies. This was not a temporary relief. The British line was definitely and considerably shortened; and the French and British troops, which during the fighting had become somewhat mixed up, with consequent difficulties as to supply and unity of command, were sorted out. At the same time the British Army was reinforced, and effective reserves were established. The thin khaki line had won glory for our Army, but it could not remain in the positions

so bravely held indefinitely, certainly not if valorous defence was to be turned into vigorous offence. These closing days of November were therefore utilised for much-needed readjustment and consolidation.

This was not only necessary in the general interests of the campaign ; there were from time to time indications that there might be immediate need to withstand a renewed attempt by the Germans to push through to Calais. For instance, on November 23, near Festubert, the enemy, after sapping towards our position and bombarding it with trench mortars, advanced and rushed some of the British defences, and repeated efforts during that day and the succeeding night were necessary before the enemy could be ejected. It was difficult and costly fighting, and was notable for the execution done by the Ghurkas at close quarters with their kukris, and for the effective use of grenades on our side. A small incident of British doggedness during this fighting may be worth recording here. During the German attack a British officer in charge of a threatened trench of some importance received a telephone message telling him to hold on at all costs. His reply was that he had never had any intention of doing anything else, and he would be obliged if he could be informed when his men's rations would be sent up !

On December 1 there was a pretty general expectation of a fresh big attack in the Yser region, and it is fair to assume that it was intended, for during the previous days large masses of German troops had been hurried forward in that direction, and the day itself was marked by heavy and incessant artillery fire over a wide front. But the expectation, entertained by many near the spot, that the Germans intended a make a bigger effort even than before to rush the Yser defences and reach Calais by that route, were destined not to be fulfilled. The next day the artillery fire died down, and no infantry attack followed it. Reconnaissance and reports to Headquarters also indicated about this time that some of the enemy's artillery was withdrawn, accompanied by his cavalry, with the exception of one Division of the Guard.

Such was the position on the Western front—intermittent bombardment and attacks and counter-attacks by small bodies, with the consolidation of trench work, upon both sides—when King George came out from England to visit his Army.

The Kaiser had throughout the war been travelling backwards and forwards between the Eastern and Western fronts, sometimes himself directing operations ; the Czar had visited his troops near the fighting line ; the King of the Belgians had been continuously with his soldiers in the thick of the fighting ;

WITH THE GERMAN ARMY.
Portable filter and sterilizer.

FESTUBERT AFTER BOMBARDMENT.

the President of the French Republic had paid visits to the Front. It was therefore fitting, though a break with long precedent (George II., who fought at Dettingen, was the last King of England to leave his country for the seat of war) that our King should for once leave England's shores and the multifarious activities in connexion with the war which occupied him, and see with his own eyes the progress of events in France and Flanders, and encourage by his presence his loyal and enthusiastic soldiers.

The Prince of Wales was already in the field, working hard and unostentatiously as a junior officer at headquarters, where he had been appointed aide-de-camp to Sir John French, and his presence and the manner in which he performed his duties were a stimulus to those with whom he was a comrade in arms. But the presence with them of the King's heir did not diminish the pride with which the soldiers of the Expeditionary Force received the King himself, nor the satisfaction which such a visit gave to his Allies.

As matter of prudence, there was no public announcement in advance of the King's movements. It was just known that he did propose to visit France, but the first actual intimation that this historic event had taken place was after he had reached the headquarters of his Army. The King left Buckingham Palace on Sunday afternoon, November 30, and at night was conveyed in a warship across the Channel. He went without pomp or pageant, as a soldier on active service, in his khaki uniform, and the next morning landed without ceremony on the French coast, being met by the Prince of Wales.

The visit lasted throughout the week, and was one of the hardest weeks that ever our hard-worked King spent during this strenuous

A BELGIAN POST.

war-time. He had come to see his men and their work, and his desire for information and inspection appeared almost insatiable. He began with visits to hospitals at the base, and Tuesday, Wednesday and Thursday were occupied with a tour of inspection of the various Army Corps forming the Expeditionary Force. Though pomp was absent, the tour of inspection was a triumphal procession through long vistas of cavalry and infantry, often of worn men in ragged uniforms just back from their turn of duty in the trenches. And the triumphal note was accentuated, not only by the cheers of King George's own troops, but by the eager cries of "Vive le Roi" from the inhabitants of the towns and countryside, who, with generous display of bunting and flags, welcomed the King of England with almost as hearty an affection as did his own soldiers. And, indeed, the French people must have been impressed with such an inspection of troops. The pageantry and colour of a military parade were lacking; the only glitter was that of stern steel; the skies were sometimes dismal with rain and fog, yet the spectacle was, in its grand significance, one which will be vividly remembered by the spectators long after far more imposing pageants have sunk into oblivion.

The impressiveness was heightened by the fact that no inconsiderable part of the inspection was made within sound of the thunder of the guns, and within view of bursting shells. At one spot, and at a moment when luckily the air was especially clear, the King stood on a spot where before him rose the smoke of the factory chimneys of Lille and Roubaix within the enemy's lines, and where his eyes fell upon a ridge of land whence evidence of recent desperate fighting was furnished by the still smoking ruins of villages. And within his gaze, too, were the ruinous outlines of the Cloth Hall and the Cathedral of Ypres, their shattered walls and towers standing out gauntly against the sky-line, amid which fell even as he watched the bursting shells of the Germans. As he turned eastward from this spectacle of barbarism his eyes fell on the woods where had been waged one of the fiercest fights in the records of the British Army, and farther away the waters of the canal on the banks of which the struggle had been so terrific. Away to the north was that other famous battleground, the valley of the Yser. On this occasion (though the week happened to be one of exceptional inactivity in the firing line) the King saw his own batteries at work, for while he was on the hill some of them opened fire, and the King was able to observe the effect of their shells upon the enemy's trenches.

The King's inspection was not confined to the army on parade; he visited the advanced

hospitals and ambulances and the numerous departments of specialized work which make up the wonderful machine of modern war—the Army Signal Headquarter Office, well described as "the nerve-centre of the army in the field," a mass of air-line and cable, wireless and telephone apparatus; the Intelligence Section of the General Staff, which collates the information received by the Signal Service; the Operations Section of the General Staff, the executive department where the knowledge gained is practically applied; and the Quartermaster-General's Department, where are concentrated the chief directions of the Supplies, Ordnance Transport, Railway Transport, Remounts, Veterinary and Postal Services; and the map branch of the Intelligence Section, where the engineers compile and print literally hundreds of maps and plans of all sorts daily. The King's final visit was to the Royal Flying Corps, whose members had so carefully assured his safety during the visit, where he was able not only to inspect British machines and note the improvements made in them since he had last inspected the nascent Flying Corps at Farnborough, but had also the satisfaction of examining an aeroplane captured from the enemy.

Nor did our King limit his visit to his own Army. As the Paris *Temps* wrote in its welcome, the presence of the British Sovereign in the midst of the Allied troops appeared as a solemn consecration of the indissoluble fraternity of arms which German aggression had created between England, France and Belgium. Frenchmen saw in the visit equal homage to their own Army. The Higher Command of that Army was received by the King, General Joffre being invested with the Order of the Grand Cross of the Bath, and Generals de Maud'huy, d'Urbal, Conneau, de Mitry, Maistre, Dubois and Grossetti receiving the Grand Cross of the Order of St. Michael and St. George. The head of the French Republic itself, M. Poincaré, was the King's guest at the British Headquarters.

There was another Army, too, which merited a visit from the King of England, for the tour of inspection was well rounded off when his Majesty drove to the Headquarters of the Belgian Army. There was a pathos in the meeting between King George and King Albert on the frontier of the little corner of territory which alone remained to King Albert undesecrated by the enemy, when, as an observer said, the Belgian soldiers cheered for the first time in his hearing since the war began, and it was a fitting occasion for the investiture of the heroic Belgian King at the hands of the British King of Britain's ancient decoration of the

A DETERMINED DEFENCE.
House held by the British in La Bassée.

BRITISH SENTRY IN WINTER GARB.

Order of the Garter. The inspection of Belgium's war-worn veterans was one of the most impressive incidents of the week.

There are many aspects in which this visit is notable, in addition to its break with the precedent of two hundred years. To the soldier it must have been peculiarly fitting that the King should have come to France just after the definite repulse of the enemy's terrific effort to break through to the port whence Britain itself was to be assailed. Another aspect of significance was noted by the French :

"The journey of the King," wrote the *Temps*, "affects us also by its serene tranquillity. With a fine gesture England thereby affirms her mastery of the sea. It is not because German submarines have succeeded in gliding under waters to the coast of France, and even Ireland, that the naval power of England is affected, any more than bombs thrown by a Taube can diminish the value of the French Army. Notwithstanding the stormy winds, the King of England crosses the sea with security, disdaining even to conceal his voyage, and scorning the attempts at treachery which his visit might suggest to the enemy."

British soldiers never doubted the affection of King George for his Army, before or after his ascent to the Throne. His labours as a practical officer when serving in the Navy in command of a torpedo boat showed that he gloried in the risks of a sea life. But when he came among them on the battlefields of France, and watched their arduous work in this greatest war we have ever waged, they must have felt how truly he was their chief, and with what solicitude he regarded their daily labours. In an order which he issued from General Headquarters at the close of his visit the King said :— "I am very glad to have been able to see my Army in the field. I much wished to do so in order to gain a slight experience of the life you are leading." With his gaining of this experience his Army was cheered and encouraged to fight on, if possible, more determinedly than ever. As Sir John French (whom the King, while at Headquarters, had decorated with the Order of Merit) declared in his dispatch recording the visit, "At a time when the strength and endurance of the troops had been tried to the utmost throughout the long and arduous battle of Ypres-Armentières the presence of His Majesty in their midst was of the greatest possible help and encouragement."

The fortnight which followed the return of King George to England was marked by one

ON THE LOOK-OUT.

BRITISH TROOPS IN THE TRENCHES.
A well-placed Maxim gun; and, inset, the effect of a German shell.

or two actions of some importance which need to be recorded, although as the reader has been already apprised, vigorous campaigning was for a time suspended. As the French Official Review of the first six months of the war pointed out, it is useless to engage in great operations in water, mud and fog, and in a season of short days. Sir John French enforced this lesson in his dispatch covering the period now under review, pointing out that during these weeks the operations of the Army under his command were subject almost entirely to the limitations of weather. Those limitations, as he remarked, were no new thing in warfare; such conditions were always inimical to military operations; but the most recent developments of armaments and the latest methods of conducting warfare had added greatly to the difficulties and drawbacks of a vigorous winter campaign, and had increased the susceptibility of armies and their work to weather conditions. To the amateur it might not, at first sight, seem that the work of artillery would be much hampered, apart from the difficulty of moving guns along heavy roads. But there was another drawback. To avoid a pure waste of ammunition when artillery is firing at long ranges requires constant and accurate observation; and that is just what it cannot get in the midst of continual fog and mist by the latest scientific development in warfare—aerial reconnaissance. Already in this war armies had grown accustomed to rely largely upon aircraft reconnaissance, not only for locating the enemy's position but also for information as to the effects derived from the fire directed on him. Wind and fog hampered such work most seriously. There was yet another direction in which wintry conditions hindered operations. As Sir John French pointed out, the fatal accuracy, long-range and quick-firing capabilities of the modern rifle and machine gun require that a fire-swept zone be crossed in the shortest possible space of time by attacking troops. But if men are detained under the enemy's fire by the difficulty of emerging from a water-logged trench, and by the necessity of passing over ground knee-deep in holding mud and slush, such attacks become practically impossible.

The principal fighting on the British front between the week of the King's visit and Christmas was, first, a somewhat determined attack made on December 6 by the Germans between Dixmude and Ypres. It may be doubted, however, whether any serious intention was behind it. At any rate it was unsuccessful.

The capture by the French of Vermelles, a village a few miles south-west of La Bassée, on December 7, may be recorded here, for Vermelles had been, for nearly two months, the scene of a determined struggle, and its capture was important, since it brought the French into a strong position commanding a considerable extent of country.

The middle of the month saw another spurt of pretty severe fighting, extending along the front from the sea by Nieuport down to below Ypres. In the north it largely took the form of repeated assaults by the Germans, but there were attacks made also by the Belgian, British and French Armies on the Yser, and particularly near Nieuport, which resulted in some small gains of territory to us. Not only were parts of the three armies thus engaged, but the British Fleet also took part in the attack near the coast; the guns of the naval squadron firing from the sea reinforced the French heavy artillery. Indeed, the naval activity was carried even farther, as four barges with British naval machine guns entered the Yser river in order to cooperate in the fighting. This was one of the few occasions on which misty and rainy weather was an aid to the fighting. For, helped by it, our infantry carried the villages of Lombartzyde and St. Georges and a strongly fortified farmhouse. In this action some of the heaviest fighting fell to the French Marines, and a bayonet charge made by them over exposed ground and under heavy fire formed one of the finest exploits of the day. But the fighting all along, among both the British and French troops, was distinguished by gallantry and the successful resistance of superior numbers. During this time also, some progress was made by the Allies in other places, such as the neighbourhood of Klein Zillebeke and St. Eloi.

Perhaps it was owing to the general feeling of hopefulness at this time and to the belief at headquarters that the enemy was withdrawing part of his forces from the Front that the French and British Commanders decided upon an attack on December 14 upon the German lines west of Wytschaete, a village which, it will be remembered, the Germans had succeeded in retaining during

OFFICERS' QUARTERS.
Outside "Arcady"—"No organs by request."

noon the Seaforths made strenuous efforts to clear the trenches to their right and left. Fighting raged furiously along this section of the line, and though no advance in force was made by the enemy our troops were pinned to their ground by his artillery fire, and the Seaforths, in particular, suffered heavily.

It was in these circumstances that orders were sent to the I. Army Corps, which was then in general reserve, to supply an infantry Brigade for the support of the Indian Corps. The 1st Brigade was detached for the purpose, and by midnight it had reached Béthune, about five miles west of Givenchy. But the seriousness of the position demanded yet more reinforcements. Sir Douglas Haig was ordered to move the whole of the 1st Division in support of the exhausted Indians. The 1st Brigade was directed on Givenchy, the 3rd on the lost trenches; the 2nd was in support, and the Dehra Dun Brigade was placed at the disposal of the Commander for the Meerut Division. These Brigades arrived, and began work, in the course of the 21st. In the early afternoon a simultaneous attack was made by the 1st Brigade from the west of Givenchy, in a north-easterly direction, and by the 3rd Brigade from Festubert (a couple of miles north-west of Givenchy) in an east-north-easterly direction, the object being to pass the position originally held and to capture the German trenches 400 yards to the east of it. By night a considerable part of this object had been achieved. In the evening of the next day, the 22nd (when Sir Douglas Haig took over command), the position at Givenchy was practically re-established, and the 3rd Brigade once more held the old line of trenches. It had been a hard, anxious, and costly fight, which eventuated in success, and the quiet behaviour of the Germans on the 23rd indicated that for the time being they were incapable of further effort.

It was an appropriate time for the slackening of hostile activities, for the armies were now on the eve of Christmas, and everyone was wondering whether the season which is so especially associated with peace would be marked by battle. Some kindly efforts, but efforts foredoomed to failure, had been made by neutral parties to induce the belligerents to agree to a truce over Christmas. But no one was prepared for the extraordinary outbursts of goodwill and good feeling towards enemies which actually took place on this strange Christmas Day. Descriptions of it do not figure in official dispatches; yet even the military student will take account of the psychology exhibited by soldiers facing each other in combat on the field, and engaged for months past in constant fighting, actually fraternizing on this great anniversary simply on account of its Christian significance. To the general reader it will perhaps be the most interesting, certainly the most moving, feature of this winter campaign. The news of it was received by the public in Great Britain, and presumably also in Germany, with bewilderment. While with us it produced a feeling of satisfaction this was not the case with the German commanders, who had various reasons for disapproving of the manifestations, as will be seen later.

The unofficial Christmas truce seems to have extended over a very considerable part of the

BRITISH SOLDIERS IN THEIR BUNKS.
These sleeping apartments are 12 feet beneath the surface of the ground.

line, but it was not universal; for example, on the night of Christmas Eve the Germans made a fierce attack upon the French and Belgian positions recently won to the north of Nieuport, and the Allies made a successful counter-attack, which resulted in the winning of a little more ground in the dunes. To the south of Dixmude, again, Christmas was marked by a bombardment, and there was occasional shelling on the British front in this region. Perhaps the recent losses of territory by the Germans at these places accounted for a special soreness which even the influence of the season could not allay. Elsewhere there was exhibited some hesitancy as to the correct attitude. At one point in the Aisne Valley the Germans left their trenches on Christmas Day shouting "Two days' truce!" but the French, suspecting a ruse, shot them all

A FRENCH AEROPLANE WHICH LANDED IN OUR LINES.
The airman was unhurt.
Inset—French troops firing at a Taube.

down. At another point, in the British lines, where a truce had been observed during Christmas Day and Boxing Day, something like treachery on the part of the Germans was discovered, for a deserter from the German side arrived in the British trenches at 9 o'clock in the evening of Boxing Day with the information that the enemy had taken advantage of the truce to mass large bodies of troops preparatory to an attack that night. A consequent artillery display by the British was of such a formidable character that the attack, if, indeed, intended, was abandoned.

At one place, on the night of Christmas Eve, British and German soldiers in their respective trenches sang a hymn together—each in their own language. But no sooner had it ended than a shower of bullets came from the German trenches.

However, this exhibition of cynicism was not general. The numerous other instances of mutual Christmas-keeping which were reported were as genuine on the German as on the British side; indeed, it was from the German side that the overtures originated, though it is worth remarking that in the British lines orders were received on Christmas morning not to shoot unless it was absolutely necessary.

But even before, on the night of Christmas Eve, fraternization had begun. In the trenches, for instance, in which the North Staffordshire Regiment was located there had been an exchange of shouted Christmas wishes, and other remarks, which apparently after a time became altogether friendly. Then the British troops got out of their trenches and sat on the parapets, and their example was quickly followed by the Germans, and conversation began. Conversation afterwards changed into song. A suggestion for a German Volkslied was made by a British officer, and was responded to. Soon the men on each side were singing, and applauding each other, and thus a regular concert was established, which appropriately ended in the British officer walking across to the German trenches, being there formally introduced to the officer in command. An agreement was then made that there should be no shooting before midnight on Christmas Day, permission to bury the dead lying between the trenches being the overt basis of the agreement. Yet even while this was going on, and men were exchanging cigars, etc., shots were being exchanged in neighbouring trenches.

The night in the North Staffordshire trenches passed jovially, "with nice big fires blazing and occasional songs and conversation," and when Christmas morning dawned the Germans sent out parties to bury their dead. The Englishmen went out to help, and the men of both armies mingled, and exchanged gifts of tobacco, food, etc. So the whole morning passed in cheerful converse and singing of songs. The British officer in command went right over to the German trenches, and exchanged greetings with a colonel and other officers, these gentlemen arranging that their

men should remain midway between the trenches. In another part of the line British soldiers actually went into the German trenches, and stayed some time! In order to obtain a permanent record of this extraordinary *rencontre* photographs were taken of German and British groups mixed. At one place the photographing became reminiscent of Hampstead Heath on Bank Holiday, for a picture taken by a German officer showed British and German soldiers arm-in-arm, with exchanged caps and helmets (see page 227). The only sign of friendliness which apparently was not displayed was the eating of their Christmas dinner in common, but they went back again to enjoy each other's company afterwards, continuing until 9 p.m., when they retired to their respective trenches, and "war" began again.

The emotions of the Saxons—it is worth noting they were Saxons, and not Prussians—so far carried them away that they asked their British enemies to "fire in the air, and we will."

This extremity of friendliness was not confined to the North Staffordshires and their Saxon opponents. Opposite a Highland regiment a tale is told of German invitations on Christmas Eve to our men to go over and meet them, and of a subsequent exchange of cigarettes and cigars. Here, it appears, the rank and file took the matter of a truce in hand, and arranged with each other a 48 hours' armistice, which the Germans inaugurated by playing, during the early hours of the morning, "Home, Sweet Home" and "God Save the King" on the cornet by an exceptionally good player. Scotsmen do not think so much of Christmas Day as Englishmen and Germans, and that was perhaps why a Highland officer went out on Christmas morning and told the Germans who were coming over to wish them a "Happy Christmas" that they were at war with them, and really they must play the game and pretend to fight. This cold reminder, however, did not suffice to damp the ardour of fellowship. The Germans again came out of their trenches, and the Highlanders endeavoured to keep them in their places by firing over their heads; but the Germans could not understand anything short of actual fraternization. One of them said, "But you are of the same religion as us, and to-day is the Day of Peace." As a Highlander remarked, it was a great triumph for the Church.

Opposite the trenches of the Rifle Brigade there were similar proceedings. As one of the officers wrote, describing the scene, "When I got back to our trenches after dark on Christmas Eve I found the Bosches' trenches looking like the Thames on Henley Regatta night. They had got little Christmas trees burning all along the parapet of their trenches." This particular officer had one of his men killed that afternoon, and his memory was full of wounded men going mad and slowly dying outside the German trenches on the Aisne, so he was not in the mood even to allow the Germans to enjoy their Christmas by themselves; and when one of them fired he had his excuse to line up his platoon and fetch down the Christmas trees. Meanwhile two of this officer's colleagues had got out of their trench

A Sentry.

A Snow Man.

CHRISTMAS AT THE FRONT.

MUD! MUD!! MUD!!!

The appearance of British troops after leaving the trenches.

and walked half way to the Germans and met two German officers and shaken hands and chatted with them. The unforgiving lieutenant melted the next day and went across to his opponents, his mind being easier when he found that they were Saxons. Of course, after this, the men on each side were soon enjoying animated conversation and mutual reminiscences of London. The Saxons retailed their war news, which apparently was to the effect that Russia had been completely wiped out, that the Germans were not going to bother the British until January 1, when their eastern army would have returned, and that then they were going to wipe the British and French off the face of the earth.

At another point on the front the Colonel of a British Infantry regiment met enemy officers (again apparently Saxons) and told them that if they would have an armistice on New Year's Day the British would play them at football. History does not record whether that interesting event ever eventuated—it is safe to opine that it did not. Still in another section of the line an international match would have been played, only the necessary football could not be found. Elsewhere one was borrowed, and the match was about to begin, but play was forbidden by the colonel of the British battalion. But at one place at least the international event was actually achieved; a British regiment had a match with the Saxons opposite them, and were beaten, three to two!

It was here that a German chaplain, burying his dead in the presence of both sides, improved the occasion by reading his burial service in both German and English.

In at least one spot the mutual Christmas-keeping began with British overtures, and a suggestion from one of our men to cease fighting, which was quickly answered by an invitation to come over to the German trenches.

Of course all these exchanges of goodwill did not take place without traces of suspicion on both sides. For instance, when the men of the Rifle Brigade, after an exchange of Christmas presents, took the Germans some tea and cocoa, the Germans warily waited for the Englishmen to drink first before accepting their hospitality. Prudence also extended to forbidding, while permitting ordinary operations outside the trenches, the making of any improvements in the barbed-wire entanglements covering the front, a breach of this regulation being followed by a warning shot from the other side.

One rather pleasing instance, which recalls a somewhat similar story from the Russo-Japanese war, was the handing by a German officer to a British officer of his photograph, with a request to him to forward it to his sister who lived in England.

This wonderful Christmas outburst is a text from which many morals might be preached, and the reader will doubtless draw his own. Among the first which will occur to him is that, from the German side, this exhibition of goodwill consorted badly with the enemy's avowed policy of "frightfulness." It received, therefore, as may easily be imagined, no support from the German Higher Command. An Army Order of December 29 forbade any recrudescence of fraternizing, and especially any approach to the enemy in the trenches, and declared that any infraction of the order would be punished as treason. German newspaper writers, composing their lucubrations in the reposeful atmosphere of their offices, drew from it, doubtless by order, many lugubrious deductions. In their safe places it was evident that making or countenancing these Christmas overtures showed that the soldiers responsible for them mistook the seriousness of the situation, and these backsliders in the policy of "frightfulness" were reminded that "the Highest authority of the Army" shared the opinion. But as both the "Highest authority" and the writers had taken particular care never to expose themselves to any personal danger, the value of their views as to the desirability of a little relaxation from the nerve-trying stress of a continued residence in the trenches, may be disregarded, perhaps with feelings not unmingled with a little contempt. The statement so far as the Emperor William is concerned was apparently true. For at a Christmas Eve party at Douai he is reported to have finished his words of greeting with the quotation, "To the dust with all the enemies of Germany. Amen."

In estimating the psychological value and meaning of these Christmas celebrations it must be remembered that, startling as they were, similar rapprochments are not unknown

IN THE BRITISH TRENCHES.
A Group of Dragoon Guards.

in the history of war. We may recall that during the Peninsular War the French and the English soldiers also fell to fraternizing, and that Wellington and the French commander took measures to stop it. It was not a sudden ebullition of sentiment produced by the wonderful influence of the Christmas Feast, but rather the gradual result of propinquity. On several occasions the soldiers on both sides having to water at the same river which separated them, came to a mutual understanding not to fire on one another when doing so. This procedure was repeated in 1914 in at least one place where the French and Germans found themselves in close proximity to a common water supply. The peaceful behaviour at the water side of the French and English in the Peninsular eventually led, first to the exchange of gifts and

BELGIANS AFTER SPENDING A NIGHT IN THE TRENCHES.

then to the exchange of visits, and English and French soldiers were found sitting around the same camp fires, sharing rations and playing cards with one another! There are many interesting and well attested anecdotes which prove this, and it became the custom in the French Army to speak of our men as "nos amis les ennemis." There was, indeed, a general understanding that neither side should fire on the outpost sentries of the other, and thus avoid useless slaughter.

Again, in the Russo-Japanese war, during the later stages of the siege of Port Arthur, the soldiers of the opposing armies entered into friendly communication with one another, and exchanged cigars and cigarettes. And there is a story of the officers of the two armies picnicking together, and making one another friendly speeches, on the occasion of an armistice for the burial of the dead. Such approaches to friendliness between combatants are not therefore unknown. They may indicate, as certainly was the case in the Peninsular War, the absence of any real hostility between the men of the contending armies, or they may show a dying down of the flame of enmity; and when this is the case they are a hopeful and fitting prelude to the coming peace, and an indication of its near approach. There were, indeed, some, chiefly among the soldiers themselves at the Front, who thought they saw in the Christmas celebrations of 1914 an intimation that the fury of the war had spent itself. But the subsequent events soon disappointed this hope. The Germans had been led to expect a short and glorious campaign, and those who had been enduring for some weeks the wretchedness of trench life in the winter had naturally lost much, if not all, of the warlike enthusiasm which had excited them in the summer. Moreover, the German is a sentimentalist, combined in warfare with a good deal of the brute, and the advent in such circumstances of Christmas was just the sort of occasion to melt his martial ardour and awaken friendly feelings. On the British side there never had been any real hate of the Germans, only a firm resolve to win the fight that had been forced upon them, and avenge the wrongs which Germany had inflicted upon Belgium and Northern France. So the British soldier also had learned to forget enmity at Christmas time, and naturally responded to the exhibition of German sentiment.

But an interesting political question arose out of it. The reader will have noted in our account of the festivities that stress was laid on the Saxon element in those parts of the line where the combatants exchanged signs of goodwill. The matter has never been satisfactorily cleared up; but there is reason to think that the friendly advances were not made where the Prussians were concerned. A story is told of fraternization between the British and Saxons at one part of the line, where the Saxons warned the British troops against the men on the Saxons' left. And it appeared that some men from a British regiment opposite the trenches indicated went out between the lines, as the others had done, but the enemy told them to go back, and fired on them before they had regained their trenches. And these unrelenting adversaries were said to be Prussians. Similarly, at another part of the line,

A CHRISTMAS TRUCE—BRITISH AND GERMANS FRATERNIZE, DECEMBER 1914.
Soldiers of the rival armies exchanged sweets, cigars, and cigarettes, and sang carols and songs in unison.

Bavarians came out for friendly intercourse, but they particularly warned the British officer there that it would not be safe to go out opposite to the next trench on the right, as it was held by Prussians. At another place a board is said to have been put up, "Do not fire on us, we are Saxons; wait till we are relieved by Prussians." From all this it was not unfair to draw the inference, which was supported at other times during the campaign by other facts, that the German hatred of England and desire to prosecute the war were a Prussian hatred and a Prussian desire, and that the Bavarians, and more particularly the Saxons, were only fighting because, as parts of the German Empire, they were forced to go where the Prussians led. It was an interesting and an important speculation, and yet, at the same time, it was easy to exaggerate it. At any rate, it was necessary to remember that, among brave men, fighting each other for their respective countries according to the rules

of war, there does, after, or between the outbursts of martial fury, grow up a sense of mutual respect, which is apt to evolve even such friendliness as will at times make the combatants unconsciously regard themselves as almost comrades in arms. Had the German Army carried on its invasion with less brutality, and its warlike operations with less unfairness and devilry, such feelings would have grown more luxuriantly among the soldiers of the Allies who fought to withstand the invasion.

We may now revert to our record of the winter's happenings on the Western front. The last battle in our record was the fight at Givenchy on December 21 and 22. Within a few days of this engagement the Allies were busy both to the left and right of that sector.

On the extreme left the combined French and Belgian forces took St. Georges, a village about a mile and a half east of Nieuport, the capture of which made a pleasing finish to the 1914 operations in Flanders more particularly since the operation at first looked doubtful.

In December the Allies were holding in front of Nieuport a very narrow bridgehead. Partly for the purpose of enlarging it they began attacks in the direction of the dunes on the right bank between Nieuport and the sea. These dunes, which were difficult to penetrate, are continued southward to Lombartzyde, a village which had been put into a state of defence. Farther to the south the inundated area began. Notwithstanding counter-attacks, varied by the bombardment of Nieuport and Nieuport Bains, the Allies gained ground, and by December 27 had reached St. Georges. Part of the village on that day was already in their hands, but another part, comprising a few houses between the Yser canal and the road, was in German possession. The floods (for it will be remembered that all this district was in the inundated area) barred access to the place except by the road and the dyke on the south of the canal. The handful of houses had been transformed by the enemy into a regular fortress, quickfirers commanded the road, and the embankment was occupied and protected by barbed wire. The Allies made a zig-zag sap along the road and along the dyke, and in this way, on December 27, they reached and captured a ferryman's house to the north of St. Georges. The next day, supported by terrific artillery fire from Ramscapelle and from among the ruins of Wulpen and Boitshoucke, the assault was made. In spite of the enemy's violent fire, some French marines succeeded, with the help of a small boat, in putting a gun into position on the dyke, at a very short distance from the fortified houses, which were reduced to ruins.* Simultaneously, from the south, Belgian troops advanced through the mud, and joined by a detachment of marines coming from the direction of Ramscapelle, took up a position in two farms, whence they swept the enemy with a raking fire. Then the French marines and Algerian sharpshooters in the zig-zag sap dashed forward, and the last of the German marines who had remained in St. Georges surrendered. They numbered only about forty, but in the ruins about 300 corpses were found, and the prisoners bore witness to the terrible effect of the French 75's.

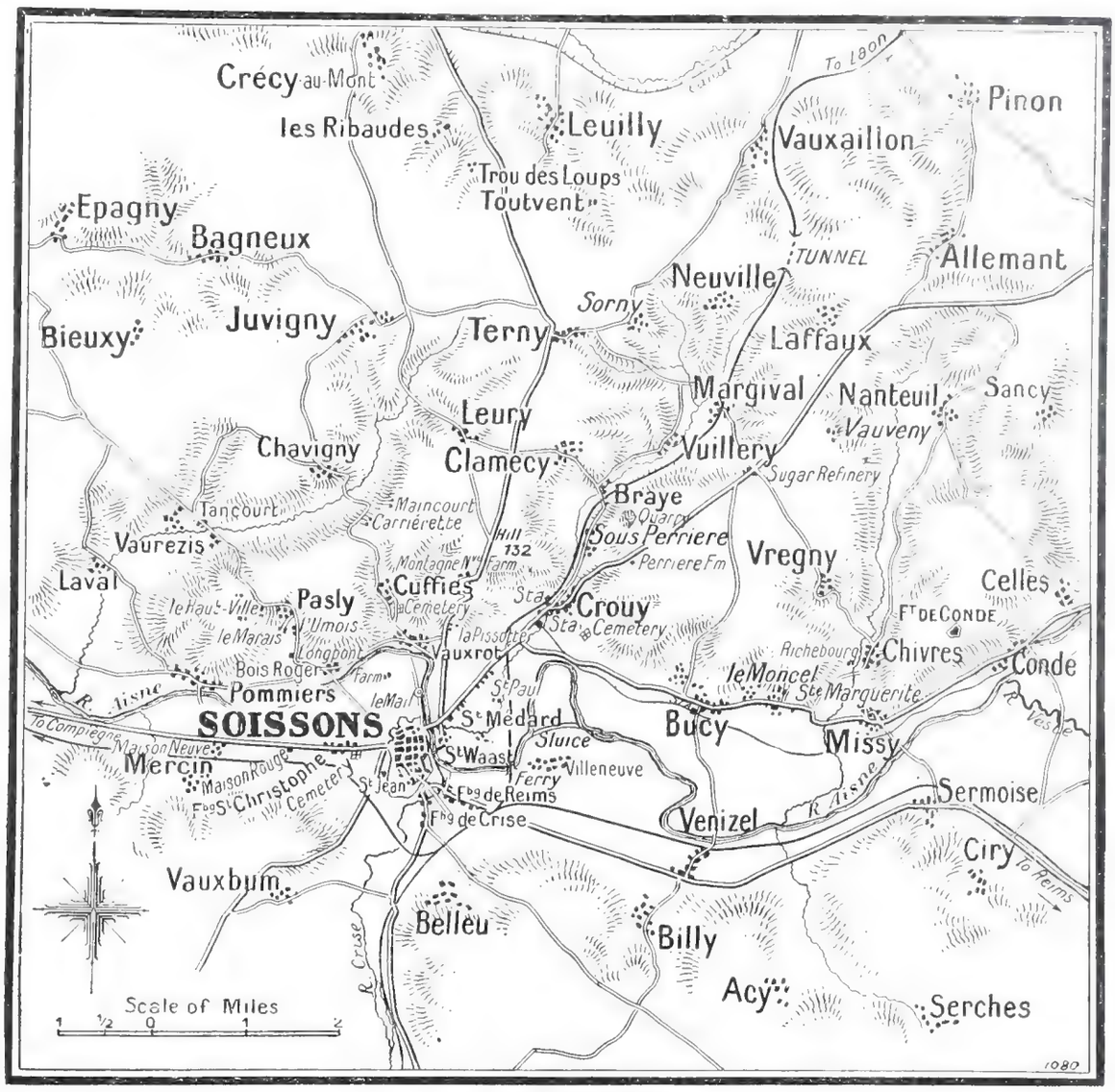
The captors were not left in undisturbed possession. During the fight they had been shelled by the German guns at Mannekensere, Slype, and Schore, and on the 30th there was a renewed and violent bombardment from this artillery, which smashed up what remained of the village, as well as the Allies' trenches, after which the Germans advanced in four columns by the dyke and the road, across the mud-banks, and even through the water. But their determination was barren of result. They were all stopped at point-blank range by the Allies' fire.

The capture marked a success not to be estimated by the unimportance of the village or the small extent of the added territory. The points seized on December 28 were valuable positions for artillery, especially useful when the time should come to advance to Ostend. Another good result of the capture was the assistance it afforded to the building of bridges across the Yser east of Nieuport—a work essential for the passage of troops and guns.

It was one of the bridges constructed at this time to which the troops, in recognition of its strength, gave the name of "General Joffre." It was a tempting prize to the Germans, and they did their best to destroy it, but their fire was, appropriately, quite ineffectual, and the enemy had to console himself with a fresh furious and futile bombardment of Nieuport and Nieuport Bains.

The satisfactory exploit just recorded was

* For an interesting illustration of this incident see *ante*, Vol. IV., p. 24



AROUND SOISSONS.

soon succeeded by another French success. Following upon several days' successful fighting (which the Germans at the time described as the most violent of the campaign) the French troops in Alsace gained a substantial victory in the capture of Steinbach on the night of January 3–4, 1915—a happy augury for the New Year. But the happy omen was not destined to be fulfilled at once.

About this time, too, there began a series of heavy engagements in the Soissons district. North of Soissons, across the river, between the villages of Braye and Crouy, is a plateau with fairly steep slopes, and among them is an eminence called Hill 132. Here the French had secured on January 8, by a brilliant attack, following a heavy bombardment the previous day, a strong position commanding the road and railway from Soissons (in the French lines) north-eastward to Laon (behind the German lines), though entire possession of the hill was not yet secured. To appreciate adequately the effort of the French it is needful to bear in mind that the German entrenchments at this point were stronger than at any other part of their alignment on the Aisne. The French Army's position, when it was gained, was very difficult to reach, yet the Germans thought it worth while to make the attempt. This they did on the following days, but with the result that a French counter-attack on Sunday, the 10th, sent the Germans flying beyond the trenches from which they had started, and placed the French in complete possession of the hill. The Germans showed their chagrin by a violent bombardment of Soissons, a form of activity which was without military object, and could only (as was the case) damage civil and ecclesiastical buildings. Seventy-five shells struck the Cathedral.

But this senseless shelling of peaceable habitations was soon followed by a more reasonable form of fighting. Von Kluck hurried

AN OLD MILL IN NORTHERN FRANCE,
Which was used as a German Observation Post.

up reinforcements by railway from his base at Laon—two army corps, it is said—and on January 12 bitter attacks by very large forces were made again on Hill 132, as well as on the Perriere spur (part of the Vregny plateau) across the valley, which had for some time past been in the possession of the French. Fighting lasted throughout the day, and at the end of it the French were still maintaining themselves at the top of the slopes west of the spur, but towards the east they had given ground, and the Germans claimed the capture of 1,130 prisoners, besides artillery pieces and machine guns. It was clear that the Germans had gained a strong advantage. That night the French were driven from the Perrière plateau, and reinforcements in the village of Crouy were foiled in their efforts to give assistance. The battle waged fiercely through the next day, notwithstanding torrential rain and the consequent soddening of the clay which must have seriously embarrassed the operations on both sides. On this day, also, the French appear to have done badly. It is true that they maintained their positions around the village of Crouy, and at the foot of the eastern slope, but they gave way on the height before Vregny, and lost their hold on the hardly won Hill 132, on the other side of the valley.

The Emperor William was present; and the Germans appear to have cheered themselves with what they described officially as "a brilliant feat of arms for our troops under the very eyes of their supreme War Lord." It was the first time he had been privileged to witness a successful operation by his troops. The commanders who had the proud distinction of showing their Kaiser what a German victory looked like, were, besides von Kluck himself, Generals von Luchow and Wichura, and they were decorated by him, in an effusion of joyous gratitude, on the battlefield. The Emperor expected that the victory would open the way to Reims, where it was his hope to hold some kind of religious service in the Cathedral, to show the world that his guns had not really shattered the building.

The rain, to which reference has been made, had an effect which worked disastrously upon the French. The Aisne, which flows by Soissons, and between that city and the hilly region now being fought over, rose about this time to such an extent that several bridges, including two large pontoon bridges which the French had thrown across the river, were carried away; probably the German artillery fire was also concerned in the destruction. The French communications were thus rendered precarious. A new bridge was built in the night, but gave way in the morning after twenty minutes' use. The position north of the river could no longer be maintained, for urgently needed reinforcements and ammunition and food could not be sent across. Moreover, the Germans, showing their accustomed ingenuity and resourcefulness, bored a tunnel through to the river banks, which they blew up, and the flood water of the swollen river poured down to the meadows,

The Germans were not able to press their victory farther. On the 14th they rushed, with picked regiments of Prussians, the hamlet of St. Paul, only a mile and a quarter from Soissons, but were luckily driven out, for a hold there might have given them Soissons and the Aisne crossing. They did not succeed in passing the river to which they had retreated in such haste the previous September, either by Soissons or farther east, where French gunners swept the plain of Venizel from the heights south of the river.

An excellent circumstance in connexion with this reverse was the frankness with which the French authorities immediately announced it to the public. They followed the opinion expressed by Colonel Rousset, a well-known military critic in France, that "it is always much better to steady public opinion on the actual extent of a reverse than to let it go astray in imaginary ways, where it might lose something of its endurance and stolidity." To know the worst at the moment fortifies; to learn it bit by bit in alarmist and exaggerated rumours disquiets and depresses.

We now have to record another battle in which the Kaiser figured as a distinguished spectator, and to some extent, it is supposed, as a commander. The Aisne having proved an intractable barrier, and the celebrations in Reims Cathedral having been thereby indefinitely postponed, the attentions of the German Army in France were turned to the La Bassée region in the north. There was good military reason for doing so, because the British not only had a strong position straddling the La Bassée canal between Givenchy on the north and Cuinchy on the south of it, but they had made movements pointing to the capture of La Bassée, where the Germans' position was a salient of great strategical importance which covered their line of communications to the Oise and the Aisne. Successful operations by the British at Festubert and Richebourg l'Avoué, north of Givenchy, and Vermelles, south of Cuinchy, must have suggested to the Germans the desirability of a counter-effort. At any rate they wanted to test the strength of the British position, and they collected large forces for the purpose.

Rumours of a British success here on January 14 had curiously been sent across to England and allowed to appear in newspapers there. There was no truth in the rumours, and much speculation rose as to their origin, as well as to the reason why the Press Bureau passed them for publication; for a flat semi-official contradiction quickly followed. But some forms of journalism have been described as intelligent anticipations of events, and this appears to have been one of them. It was undoubtedly a fact that a fortnight later there were engagements near La Bassée, and success attended the British side.

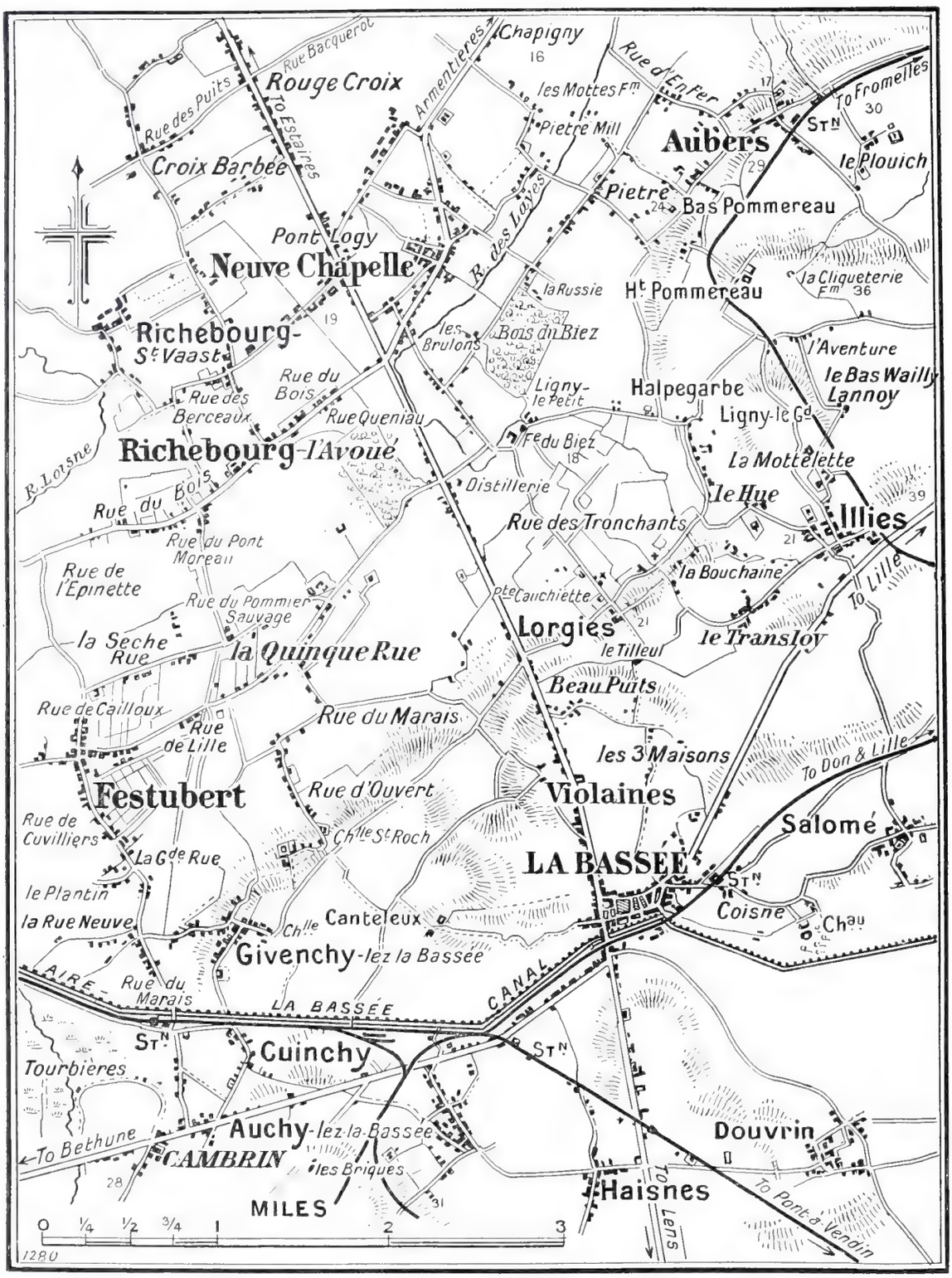
The principal attack which had been carefully prepared for some days before, under the inspection of the Kaiser, was on Monday, January 25, on the morning of which day, in addition to a demonstration along the whole line from Festubert to Vermelles and as far north as Pervyse and Ypres, the Germans began to shell Béthune, the town in the British lines some nine miles west of La Bassée. Half an hour later, at nine o'clock, following upon another and heavy bombardment by the enemy with artillery and *minenwerfer*,* a strong infantry attack led by the 56th Prussian infantry and the 7th Pioneers developed south of the canal which runs eastward from Béthune. At this point the British line formed a pronounced salient from the canal, running forward to the railway triangle near Cuinchy and back to the main La Bassée-Béthune road, where it joined the French forces. The salient was occupied by half a battalion of the Scots Guards and half a battalion of the Coldstream Guards, many of whom were new drafts from home. The German advance was made along the road, for the fields were a sea of mud, and the road itself little better, though it did at least give some foothold, and in picturing to himself the scene of this battle the reader must remember that the whole of the day's fighting took place in the midst of appalling slush.

The effect of the bombardment was the almost immediate blowing in of the trenches in the salient, and, as a result, the enemy's attack penetrated the unsupported British line. The Germans were also assisted by an armoured train which they brought along the railway from

Blücher to join on to the Army of the North coming down from Belgium, and the junction of the two forces proved the turning point in the campaign.

The Aisne is a difficult river to bridge with its high and treacherous banks, and the possession of the permanent point of crossing in Soissons was important both in 1814 and a hundred years later.

* These trench mortars have already been mentioned in Vol. I., p. 225.



COUNTRY FROM NEUVE CHAPELLE TO LA BASSÉE.

La Bassée, running it almost into Béthune, or near enough to fire some twenty shells into the town. The enemy's infantry advanced in compact masses with great bravery, throwing hand grenades. They were met with the bayonet, but they came on in such numbers that in many cases there was no time to withdraw the bayonet after a thrust. Moreover, at some points of the line the distance between the trenches was so short that it was impossible to stop the rush from one to the other. So the Germans swept on, and broke through the line. In some places the British troops fell back, to avoid being enfiladed.

But the Germans did not have matters all their own way. A heavy column which had debouched from Auchy (south-east of Cuinchy) was allowed to advance until it was in an exposed position in the fields, when it was caught by the French and English guns and almost

annihilated. The column is said to have consisted of two entire regiments. After the bombardment very few escaped; the rest were taken prisoners, and numbered only about two companies.

The Guards retreated to a partially prepared second line, running north and south from the canal to the La Bassée-Béthune road, about 500 yards west of the railway triangle, and strengthened by a keep, constructed midway along the line in some brickfields. At this second line the other two half battalions of the Scots and Coldstream Guards were in support. These held up the advancing enemy, who managed, however, after a punishing from the machine guns, to establish himself among the brick-stacks and in some communication trenches running each side of the keep, parallel to our line, and even west of the keep—*i.e.*, closer to our trenches.

The situation obviously demanded reinforcements, and the London Scottish were sent up in support, while a counter-attack by the 1st Royal Highlanders, part of the 1st Cameron Highlanders, and the 2nd King's Royal Rifle Corps, was organised for one o'clock. At that hour, and with the co-operation of the French on their right, the troops moved forward, and good progress was made on the flanks, by the canal and the road respectively, but the centre was held up. Late in the afternoon the 2nd Royal Sussex was sent up to support, with the result that the enemy was driven back far enough to enable a somewhat broken line to be taken up, which cleared the ground between the keep and our line of trenches. There was, therefore, a partial recovery of the ground lost in the morning.

Meanwhile the French left, on the other side of the La Bassée-Béthune road, which here divided the Allies, had been attacked, and driven back somewhat, but not so far as the British, so that the French left was in advance of the British right, and exposed to a flank attack from the north. But the enemy did not avail himself of the opportunity thus offered. During the night the British position was strengthened, and the 1st Guards Brigade, which had suffered severely, was withdrawn into reserve, and replaced by the 1st Infantry Brigade.

The German strategical plan had been to tempt the British to concentrate their defence on the line between Givenchy and Festubert, north of the canal, and then the British right was to be turned by the troops attacking south of the canal. Thus simultaneously with their attacks south of the canal, the

FRENCH CYCLIST PATROL.

Germans were busy north of it. They delivered an equally severe attack upon the British position in the village of Givenchy, about a mile north of the canal which bounded the scene of the other attack. Here, too, the early morning was marked by a heavy bombardment with high explosive shells, and after this preparation, at a quarter past eight, the German infantry advanced. The British artillery met them with an effective fire, which would have been more effective had it not been hampered by constant interruption of telephonic communication between the observers and the batteries they were serving. Nevertheless, this fire, combined with that of the infantry in the trenches, drove the assailants from their original direction of advance, with the result that they crowded together in the north-east corner of the village of Givenchy, having passed over the front trenches of the British defenders. They also penetrated into the centre of the village, and as far as a keep which had been put into a state of defence. By this time they had lost heavily, over 100 being killed with the bayonet alone.

The reserves, the 2nd Welsh Regiment and the 1st South Wales Borderers, with a company of the 1st Royal Highlanders, now delivered a completely successful counter-attack, supported by the fire of the French artillery. There was a period of vigorous street fighting, and all the Germans who had forced their way into the village were either captured or killed.

It was during this street fighting that occurred an incident worthy of record as an illustration of British pluck and coolness. A British soldier broke into a house held by eight Germans, bayoneted four, and captured the other four, and during the whole of the operations continued to suck his clay pipe. By early afternoon the original British line round the village was re-established. Five times the Germans returned to the assault, and each time they were driven back, with many losses.

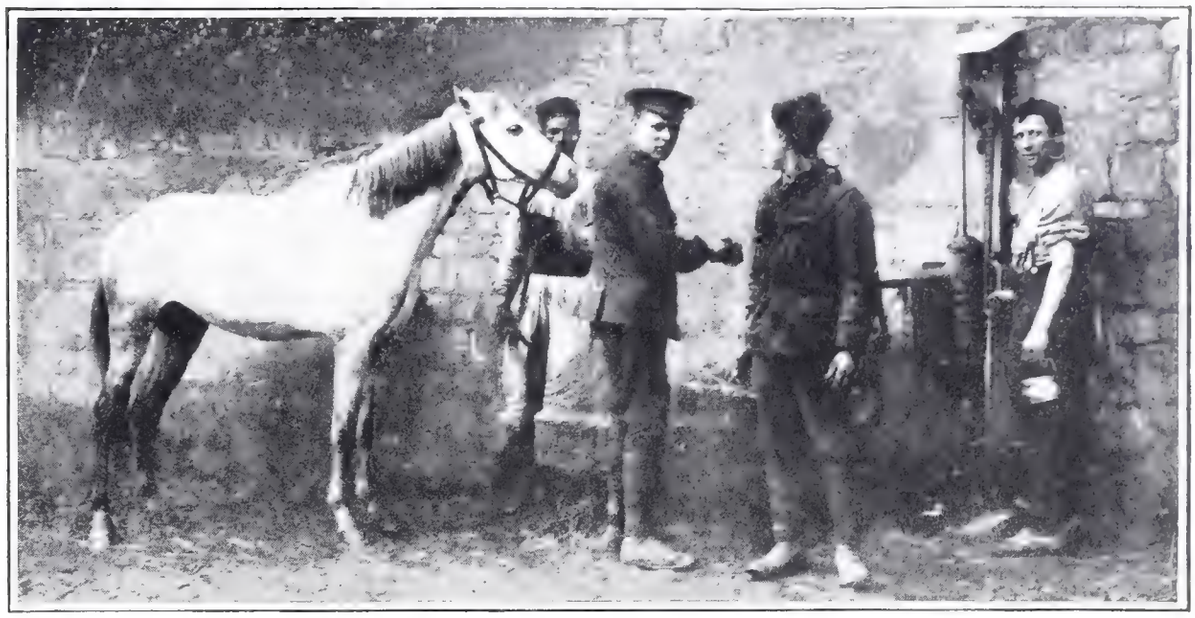
South of the village, however, and near the canal, where the 2nd Royal Munster Fusiliers formed a connecting link between Givenchy and the action south of the canal, the troops, under the influence of the retirement on the south, themselves fell back in conformity with it, but their retirement was only temporary; after dark they returned to their old positions.

The next day a fresh attack was made on Givenchy and along the La Bassée-Béthune road. It was a minor affair relatively to Monday's battle, yet there was some warm fighting, as the presence of 300 German corpses on the road after the engagement testified. It was not successful and the counter-attack which it provoked gave the British back some of the positions lost the day before.

Then followed a lull in the operations.

But early in the morning of Friday, January 29, began a preparatory shelling from the Germans, the target chosen for the projectiles being the British line held by the I. Army Corps between the La Bassée canal and the La Bassée-Béthune road, near Cuinchy. After the shelling three battalions of the 14th German Corps made a violent attack on the keep (with scaling ladders) and to the north and south of it. On the keep and to the north of it was the Sussex Regiment, who held the Germans off, and inflicted serious losses upon them, incidentally killing every man of a party of Germans who had reached one of the British trenches.

TRENCH MAKING.



AT A VILLAGE PUMP IN NORTHERN FRANCE.

South of the keep was the Northamptonshire Regiment, and the Germans succeeded in reaching their trenches, but they were immediately counter-attacked and all assailants were killed. The British casualties throughout the day were inconsiderable, but 200 of the enemy's dead lay along the British line. On this day also the French, on the south of the Béthune road were attacked, and this assault likewise was repulsed.

Had the Germans been successful in this attempt to break through near Béthune their prospects would at once have assumed a much more roseate complexion. They would have opened for themselves another road to Calais—a road along which they might easily have walked in the previous autumn when only a handful of British soldiers held Béthune, but then the mind of the German Command was obsessed by Ypres and the conquest of the last remaining corner of Belgium, and the opportunity was missed. The rolling up of the British line at Béthune would have had other substantial and more immediate advantages. The countryside itself was well worth possession, for it comprised a district of extraordinary agricultural richness, in sharp contrast with the lean and marshy country round La Bassée. And it was the headquarters and advanced base of the British Army, where were stationed the troops not immediately required in the fighting line. Such an exclusively British centre had Béthune and the neighbouring towns and villages become that even the civil administration of them had virtually passed into the hands of the British Army authorities. A successful German thrust here would, therefore, have had serious and demoralizing results upon their opponents. The failure to capture this coveted terrain must have given the Kaiser some bitter thoughts to contrast with his birthday congratulations.

On Monday, February 1, a fine piece of work was carried out by the 4th Brigade in the neighbourhood of Cuinchy. At about 2.30 on that morning some of the 2nd Coldstream Guards had been driven from their trenches, but had made a stand some twenty yards away, and they held their positions until daylight. At 3.15 a counter-attack was launched by a company of the Irish Guards and half a company of the 2nd Coldstreams, but was unsuccessful. Then, at 10 o'clock, the lost ground was subjected to a ten minutes heavy bombardment by the British Artillery, and it was immediately followed by a bayonet assault, conducted by some eighty men of the Coldstreams and Irish Guards, followed by a party of engineers with sandbags and wire. This little force brilliantly retook all the ground that had been lost, in addition to capturing a German trench, two machine guns, and thirty-two prisoners. In view of the discussion which began about this time concerning the necessity for a big supply of high explosive shells, it is interesting to note, in connexion with this brilliant little episode, that the General Officer commanding the 1st Division described the artillery preparation of our counter-attack as "splendid, the high explosive shells dropping in the exact spot with absolute precision."

A record of these days would not be complete without a glance northwards to the shore where the Belgians and the French with some Sepoys from the Indian Army were holding back the German advance to Calais along the sea road. In the closing days of January the Allies saw reason to suspect a fresh German attack on the Yser, and they determined to anticipate it. Between the village of Lombartzyde and the sea is a very large sand-hill called the Great Dune. It was in German occupation, and the Allies spent Thursday, January 28, in attacking it, and succeeded in getting a foothold. It was an admirable feat of arms, because of the difficulties in the way of an assault upon this position, and because of the strategic advantage its possession had given to the Germans, as it commanded the road to Ostend. That side of the hill which, with its guns, dominated the road and the village of Lombartzyde, still remained in the German possession.

This attack upon the Grande Dune was, though of secondary importance in respect to the numbers engaged (they only amounted to four companies), a brilliant and tenacious piece of work, and was remarkable for the heroic courage of the Allies' troops. After the artillery preparation and infantry reconnaissances and a half-hour's rifle firing, the Allies' columns debouched and hurled themselves to the assault along the entire front. The first line of trenches was full of water and unoccupied, but large numbers of the enemy were met crouching behind cover some distance farther on. Most of them were killed with the bayonet, but before the attackers could establish themselves in any way they were caught between enfilading fires and forced to return to their point of departure. This was on the right; in the centre and on the left the Allies threw up some rudimentary cover, and held the ground until the evening. Simultaneously with the attack on the left just mentioned, two sections of tirailleurs reached to the top of the Grande Dune, and one section actually began moving down the opposite slope, but there it came under violent fire from a second crest situated behind the first. The section suffered heavy losses, and was reduced to one non-commissioned officer and five men. These dug themselves in and held their ground in a little redoubt built by the Germans on the south-western slope of the Grande Dune, and remained there until all six were killed, one after the other, during the afternoon. Their comrades tried to get to their help by digging a communication trench from the Allies' old trench up to the redoubt, and succeeded in reaching it, but a counter-attack from the Germans was successful, and placed it again in the enemy's hands. Thus it was only the outer portion of the Grande Dune which actually came into the Allies' possession,

GERMAN CAVALRY ON THE MARCH.

though they thereby gained a position from which they could send a damaging fire against the extreme right flank of the Germans established before Westende, besides rendering the Grande Dune itself a less comfortable defence for the enemy than it had been. It was a sanguinary fight, for not only did the Allies lose heavily, but 300 dead Germans were counted in the neighbourhood of the redoubt, and there were fifty prisoners.

During the succeeding weeks fighting in this coastal area was confined, through the detestable weather conditions, to artillery practice, but lower down the line, round the famous storm centre of Ypres, there was some heavy work about the middle of the month of February. Owing to the intricate character of the country, with its maze of trenches and many enclosures and small woods, the fighting was of a very confused nature, and it had no noteworthy results upon the campaign. Severe as it was at times, perhaps the best lesson gathered from it was the uselessness of throwing masses of troops into collision under such conditions and in such weather.

The main German attack was begun on the morning of the 14th, and at first was marked by success for the enemy, the British counter-attacks being unsuccessful. But during the succeeding night almost the whole of the line was regained. Fighting continued during the next day and during the night succeeding the 15th the rest of the line was retaken. The Germans had nothing to show for their effort but the corpses which strewed the scene of the combat.

Nevertheless they returned to the fighting with even greater intensity on the 17th, both to the north and to the south of the Ypres-Comines Canal. South of it their attack was repulsed, but on the north two of the British trenches were stormed, after they had been blown in by mines. It was a short-lived success, however, for the British troops gallantly returned to the charge and recovered the trenches, which they found to be heaped with German corpses. Those of the enemy who were alive, waiting for the British bayonet, hurried to the rear of their trenches on the approach of the assault. The preliminary bombardment had been so terrific that what was left of the enemy was demoralized. Yet the casualties were heavy on the British side also.

This fighting south-east of Ypres, particularly that to the north of the Ypres-Comines canal, was exceptionally difficult, because the ground was such that the men charging would sometimes sink up to their knees in the mud. It was in such conditions that on the 15th the British were suddenly caught in the open by a tremendous fire from the enemy's guns. It was enough to dismay the boldest troops; but without a moment's hesitation they advanced. The line broke into the double, and, pounding through the mud, burst into the Germans' trench and (to illustrate the confined character of this fighting) both Germans and British remained in this trench

GERMAN SENTRIES IN THE SNOW.

together within a few yards of each other for some time.

A gallant exhibition of dogged courage was also given during this fight which was worth recording. One of the British trenches had become more or less isolated in the course of the fighting. The forty men in it continued to hold firm until every one of them was either killed or wounded, and eventually only three were left who were capable of firing; and they continued firing, holding the enemy at bay. The British troops in the rear did not know how badly things were faring, but had been told that ammunition was nearly exhausted, and seven of the strongest men were sent up to the trench with as much ammunition as they could carry; they found the three wounded survivors standing amid the bodies of their

dead and disabled comrades, steadily firing. The support of seven new men was not much against a new assault which the Germans were just launching, but these ten men between them managed to beat it off and saved the position.

As we have said, this fighting around the Ypres-Comines canal was without tangible result, but during this same period the French in Champagne on the front extending between Souain and Beausejour had placed more definite successes to their credit. In an action to the north of Beausejour, to the north of Mesnil and to the north-east and north-west of Perthes on February 16 the French took nearly two miles of German trenches occupying crests, with some 400 prisoners. These were trenches of the first line. The next day, encouraged by their success, the Frenchmen gained possession at different points of the Germans' second line and captured some hundreds of additional prisoners. These gains were extended in the closing days of February, notwithstanding constant counter-attacks by the Germans. On the 28th, for example, to the north-west and north of Beausejour some 2,000 metres of trenches were taken. During all this fighting the French were successful, and captured about 1,000 prisoners, and the enemy did not score a point on any day. Steady and determined progress in this district continued right along into March, almost every day recording some pushing back of the German line. In fact, this was the one part of the western front where during the winter the Allies made steady and appreciable progress.

The months reviewed, although affording no great gains to the Allies, show some progress. They had more than held their own, and at great cost to the Germans—far larger than the losses suffered by themselves. There was now a comparative lull in the fighting, until the great attack on Neuve Chapelle took place on March 10.

WINTER GARMENTS—FRENCH AND ENGLISH.

CHAPTER LXXI.

WOMEN'S WORK IN THE WAR (I.).

Women's Anxiety to Help on Outbreak of War—Mobilization of the Nursing Services—Queen Alexandra's Imperial Military Nursing Service, Territorial Nursing Service, Naval Nursing Service, and the British Red Cross—Women Doctors at the Front—Women's Military Hospital in London—Queen's "Work for Women" Fund—Scheme of Central Committee on Women's Employment—Queen Mary's Needlework Guild—How the Suffragists and Anti-Suffragists Helped—Formation of War-Register of Women by the Board of Trade—Replacement of Men by Women.

OF the millions of British women only the military nurse could, like the soldier, look on war as her business. So closely, we are told, does the work of the nurse follow the soldier, that the faintest whisper of discord amongst nations rouses her to interest and action. A quiet group of matrons of the nursing service spent the Sunday before the declaration of war waiting in the electric atmosphere of the War Office for the news that meant so much for them as well as for the Army. These women alone out of the seven millions of women "gainfully occupied" in the British Isles were relieved from the difficulty of wondering how they could help. The rest had no official lead in the matter of work.

In France on the outbreak of war the Government gave the women their call to take the place of men everywhere. They gathered in one harvest, and they prepared for the next; when they and the réformés were preparing to reap their second crop, then only did the clear and definite call for the service of English women come from the English Government. In the meantime half a million German women, in addition to those employed in farm, field and factory, were drawn into the German ammunition factories to make ammunition and set free half a million German men to fight the Allies.

If the call did not come from the Government from the beginning of the war it came from the women themselves. If they could not replace men, at least they could work for them. They knew that there would soon be wounded to look after; one could work for them now—cut out "hopeless case" shirts,

OFF TO THE FRONT. [*By courtesy of "The Nursing Times."*
Bidding good-bye to Nurses at Waterloo Station.

make bandages—and women rushed to the military hospitals and to the voluntary aid detachments to look for patterns, and form sewing parties amongst themselves. The Red Cross Society, as yet with only the voluntary aid detachments at its call, took up its quarters in Devonshire House and, while organizing its activities, supplied the newer patterns and clear directions. The Queen formed Queen Mary's Needlework Guild, and voluntary needlewomen mobilized themselves everywhere.

Women could think and talk only of the war; the shops were empty save in the new departments that catered for soldiers' and sailors' comforts. Industrial women workers, mainly employed in luxury trades or in unskilled work, dropped out of employment in their thousands. In London alone, in those black days, there were 40,000 women thrown out of work. Here again the Queen, hitherto unassertive and little known to the working women of England, stepped into the breach and caused to be organized one of the greatest and most far-reaching schemes of economic relief ever attempted in any country. She called to her help women who had spent their lives amongst the working women, and she brought her splendid common sense, united to the expert's advice, to bear on a problem that was at first sight appalling.

The women's societies, the great Suffrage organizations that had fought the Government tooth and nail by militant and constitutional means, the anti-Suffragists who, in turn, had organized in the opposite direction, and the women's political societies, all laid aside propaganda and mobilized for war work either in relief measures or for work connected with the troops. A great war organization, the Women's Emergency Corps, appeared after the second day of war and made themselves the national "handy women," who would go anywhere and do anything. New organizations and societies sprang up everywhere, many of them organized for Belgian relief, yet curiously enough, there was little overlapping amongst the women—the total percentage of overlapping war agencies is estimated at 10 per cent., and of that a very small proportion was due to women. Women doctors assumed a great and new importance partly due to the fact that there was a threatened shortage of medical men and partly because they had not been properly appreciated in the past.

Significant, too, was the action of the great Begum of Bhopal, the only woman ruler in India, who sent her son with a number of her own Imperial Service Troops to the service of the King Emperor, and gave a hospital ship besides.

Offers of hospitals and hospital ships came in numbers from women in the overseas and in the home countries. And there was great devotion in the gift of many of them. Lady Beatty, for instance, who fitted out her yacht, the Sheila, as a hospital ship the day Admiral Sir David Beatty went on active service. spent the whole winter on board. And there were many women like her at that time. In service for others was the greatest relief from anxiety. The women who held men back were few, and there were few selfish women in

the British Isles or Greater Britain during those anxious months. When at last the Government gave the call to replace men—not a clear call nor a repeated call—the women answered very quickly and very decisively. It was one of the unconscious ironies of the war that the Government specially asked its ancient enemies, the Suffrage societies, to make its scheme of war service known as widely as possible. Nothing could be the same for women after the war, that at least was the clearest fact that came out of the work and the sorrow of those times.

If women's capacity was first discovered in the war the discovery was dearly bought, and women went about their many new offices with only the steward's pride who keeps the house in order for the return of the owner.

One of the great feats of the war was the mobilization of the nursing services. It was as worthy of admiration in its way as the mobilization of the Expeditionary Force. To understand the swiftness and the promptness of the answer to the official call it is necessary to realize what were the nursing services available and how they were utilized.

There were three branches of the military nursing service; the senior service, Queen Alexandra's Imperial Military Nursing Service, which at the outbreak of war consisted of about 279 members—matrons, sisters and staff nurses, with a reserve which was presently largely increased. Of this service Miss Becher, R.R.C., was matron-in-chief, and Miss McCarthy, R.R.C., principal matron; the latter was shortly after appointed principal matron with the Expeditionary Force. The second was the Territorial Force Nursing Service, numbering 3,000, of which Miss Sidney Browne, R.R.C., was matron-in-chief; and there were also the civilian nurses, who could be called up to supplement the Imperial Nursing Service.

The Military Nursing reserve was immediately called up, and a number both of the regulars and reserve found themselves embarked on one of the transports en route either for an unknown destination at some base hospital in France or drafted to Netley, Aldershot, Woolwich, or London according as the need for them arose; the wounded being sent as the medical service became organized as quickly as possible to the military and territorial general hospitals.

These two military nursing services, the regular and the territorial, differ from each other in their origin and also in some matters of organization. Queen Alexandra's Imperial Military Nursing Service was evolved after the Boer War out of the old army nursing service. The status of the military nurse was not satisfactory, and shortly after the accession of King Edward, Queen Alexandra called a small committee to reorganize the service. The result was the appointment of a matron-in-chief directly responsible to the Director-General of the Royal Army Medical Corps, with rooms in the War Office and official recognition. This service was formed in April, 1902, and the first matron-in-chief was Miss Sidney Browne, R.R.C.

All the large military hospitals in the United Kingdom were staffed by these military nurses,

[*By courtesy of "The Nursing Times."*

NURSES OF THE 4TH LONDON TERRITORIAL HOSPITAL.

MISS FLETCHER,
The Matron-in-Chief of the British Red Cross Society in France.

and not the least part of their work was the training in nursing and ward work of the R.A.M.C. non-commissioned officers and privates, whose splendid services under fire won early recognition during the war.

All questions arising out of the nursing service were submitted by the matron-in-chief to the Medical Director-General. She had the assistance of civil matrons on the nursing board, who, being the heads of large nurse-training schools, maintained definite connexion with civil hospitals, and ensured that the organization of the seventeen military hospitals was up-to-date. Most of the big civil hospitals and their nursing staff had a peace-time arrangement by which their matrons and sisters could at the shortest notice be prepared for a large number of wounded. The "London" was the first to be called up, the Matron having to arrange at a few hours' notice.

The largest number of nurses available at the outbreak of war was that attached to the Territorial Forces; there were 3,000 women who could be immediately mobilized, and when it is remembered that references cannot be taken up in a day or two and that the enrolling and indexing of a vast number of women is a lengthy matter, this great number of willing women was a magnificent asset. On August 4 war was declared; on August 5 the first Expeditionary Force was mobilized, and, on the same day, mobilization orders were sent out to every Principal Matron with orders for every member of her staff. In ten days twenty-three Territorial General Hospitals in different parts of the country, in England, Wales, and Scotland, were ready to receive the wounded, and the 3,000 Territorial nurses throughout the country were ready too.

When mobilized at the outbreak of war, each general hospital contained 520 beds and a nursing service of ninety-one members and a reserve of thirty. But this accommodation proved inadequate after nine months of war, and the accommodation in all the Territorial hospitals, except two, was increased from 1,000 to over 3,000 beds, and many auxiliary hospitals had to be organized. The following table gives some idea of how the Territorial General Hospitals stood in June, 1915. The nursing staff at that time had had to be increased to 4,000 members.

ENLARGED TERRITORIAL HOSPITALS.

Approximate number of beds and number of traincd and untrained staff which will be required. Reduction one-third of trained staff. Two V.A.D. members to replace each trained nurse taken away.

Hospital.	Place.	Beds.	Trained Staff.	Untrained Staff.
1st London.	Camberwell .	1,040	122	90
2nd ,, .	Chelsea .	820	96	70
3rd ,, .	Wandsworth.	950	111	82
4th ,, .	Denmark Hill	970	114	84
1st Southern	Birmingham.	3,210	375	280
2nd ,,	Bristol. .	2,300	268	201
3rd ,,	Oxford. .	1,008	118	87
4th ,,	Plymouth .	520	61	45
5th ,,	Portsmouth .	520	61	45
1st Eastern.	Cambridge .	1,550	181	135
2nd ,, .	Brighton .	1,001*	62 33	47 32
1st Western	Liverpool .	1,800	210	157
2nd ,, .	Manchester .	3,554	415	310
3rd ,, .	Cardiff. .	1,910	223	166
1st Northern	Newcastle .	739	86	64
2nd ,, .	Leeds . .	1,900	222	165
3rd ,, .	Sheffield .	1,750	204	153
4th ,, .	Lincoln .	1,004	118	87
5th ,, .	Leicester .	1,870	218	163
1st Scottish	Aberdeen .	1,180	118	102
2nd ,, .	Edinburgh .	900	105	78
3rd ,, .	Glasgow .	1,290	151	102
4th ,, .	Glasgow .	780	91	67
	—	32,566	3,653	2,812

* Beds: Dyke Road, 533; Dyke Road, 98 (nursed by orderlies); Kemptown, 370.

There were besides these nurses over 400 Territorial nurses in France, Belgium, the clearing stations at the Front and in the floating flotilla.

The Territorial nursing system was in 1914 eight years old. It was Miss Haldane's idea,

and a draft scheme of an establishment of nurses willing to serve in general hospitals in the event of the mobilization of the Territorial Force was made at a meeting held at Miss Haldane's house in 1907, at which Sir Alfred Keogh and Miss Sidney Browne were present, and was submitted to the Army Council. An Advisory Council was appointed at the War Office, of which Queen Alexandra signified her willingness to be president. Local committees were formed at each hospital centre by the County Association administering the unit, to receive the names of nurses wishing to join the service. One of the most important parts of the scheme, and one which was of extraordinary value in the early days of the war, was the appointment as principal matrons (unpaid) of the matrons of the largest and most important nurse-training schools in the Kingdom. To them the success of the service and the maintenance of the requisite number of nurses was due. It was they who, besides their advisory duties, received the applications of matrons, sisters, and nurses wishing to join the service, obtained the necessary references, and submitted them, after approval by local committees, to the Advisory Council at the beginning of each quarter. To their splendid routine work was due the ease of the vast mobilization. Only fully qualified nurses were enrolled. Three thousand were enrolled before the war: the

[*By courtesy of "The Nursing Times."*

AROUND THE STATUE OF JOAN OF ARC.

British Military Nurses at Le Havre.

number rose to 4,000 in nine months' time. Their dress was similar to that of the other military nurses, but of a darker colour—a blue-grey uniform with cape faced in scarlet.

The Naval Nursing Service, though important, was not a large service, nor was it faced with such demands upon its personnel as the other services. When war broke out Queen Alexandra's Royal Naval Nursing Service had about seventy members, with a reserve from the civil hospitals, the statement of the strength of which was to be renewed every six months. There was not, as in the other services, a matron-in-chief; instead there were three head sisters, Miss Evangeline Hart, R.R.C., at Plymouth, Miss Katharine Hickley, R.R.C., at Haslar, and Miss Margaret Keehan, R.R.C., at Chatham.

There were no innovations in the naval service and no demands for large numbers of nurses. The arrangements already made with the civil hospitals worked admirably, and the nurses quickly adapted themselves to naval routine. When the hospital ships and the hospital carriers mobilized the nurses were ready for duty, and the naval hospitals were ready for every emergency. In the sick bay on battleships there were, of course, only male orderlies, who had been trained in the naval hospitals.

The first reserve nurses called out were for the Admiralty—thirteen leaving the London Hospital for Haslar on the day war was declared, seven leaving St. Bartholomew's for Chatham, and one the Metropolitan for Plymouth. The War Office asked the London for fourteen nurses—two for Chatham and twelve for Preston. These were the first civil nurses to go on war duty.

It may be added that the many nurses (not on the reserves) who offered their services at the outbreak of war at the War Office or the Admiralty were referred to the British Red Cross Society. Later, when more military nurses were needed, they were referred to the Matron-in-Chief of the War Office.

The British Red Cross Society, of which Queen Alexandra is President, is the British representative of the great International Red Cross organization at Geneva, the object of

IN FRANCE AND BELGIUM.

Wounded British soldiers at the Hotel Bristol, Boulogne. Inset: Lady Lethbridge in Belgium.

IN BELGIUM AND FRANCE.

At the Hotel Flandria, Ghent, used as a Red Cross Hospital. In this picture are seen British, Belgian, and German wounded.

Inset: Attending to the wounded outside a hospital at Marseilles.

which in every country is the relief of the sick and wounded. That was the idea of its formation. In times of peace it is in touch with the War Office and the Admiralty; in time of war it is under their control. The work of its voluntary aid detachments had been organized since 1909 to give voluntary aid to the sick and wounded in the event of war in the home territory. At the outbreak of war, up and down the country, there were 60,000 men and women partly trained in transport work, cooking, laundry, first aid and home nursing.

Two days after the outbreak of war Queen Alexandra, as President of the Society, appealed to the public for funds. Almost the first action of the Red Cross Society was to secure a trained matron, who was soon joined by other trained workers. Within a fortnight of the outbreak of war, between 2,000 and 3,000 fully qualified trained nurses were registered. Devonshire House had been lent by the Duke of Devonshire, and here the officials of the Red Cross Society battled with the zeal of anxious and unqualified ladies who wished to go immediately to the Front as Red Cross nurses. Gently but firmly they were restrained, and were told that only the best and the best trained were good enough for the men who were giving up so much. Some who had the means to go went on their own account, and endeavoured to be useful, or to enjoy themselves, according as their desire to serve was real or imaginary. Presently they were rounded up and sent home again very summarily—no amateurs were wanted. This clean sweep of the useless came when Miss Swift, the late matron of Guy's, was appointed as matron-in-chief by the joint Committee of the British Red Cross Society and the Order of St. John of Jerusalem. She had returned from private life to which she had retired to see that the honour and credit of the nursing service was upheld, and that there was no repetition of much that had been unworthy in the Boer War.

In the beginning of the war, the Order of St. John of Jerusalem had only its ambulance and voluntary aid detachments to call upon, but like the British Red Cross Society, it, too, presently organized a nursing service, carrying on its organization at St. John's Gate, while the Red Cross organized at Devonshire House. Both before and after the formation of the joint committees of these societies, the pick of the nursing service offered themselves; in all the civil hospitals the matrons made every possible effort to set free their best and most competent. When the joint committee was set up for the administration of the *Times*

IN HYDE PARK.
Enjoying the sunshine.

Fund (which reached nearly a million and a half in ten months), the nursing staff was selected at St. John's Gate, Clerkenwell, and doctors and orderlies at 83 Pall Mall, now the headquarters of the British Red Cross Society. The board of selection of matrons included Miss Rogers, Miss Keir, R.R.C., Mrs. Corner, Mrs. Watson, R.R.C., Miss Roberts, and others from the first. They passed all trained nurses and all Voluntary Aid workers for military and other hospitals; they also passed all workers for the Anglo-French Hospitals Committee.

As the war proceeded, and it was found necessary to open V.A.D. hospitals in private houses, the nursing arrangements of these were put in charge of trained matrons and trained nurses passed for duty by the Advisory Board. After nine months of war there were 800 hospitals with personnel selected by this Board.

On August 12 the first party left for Brussels, consisting of a matron and six sisters; a second party went on August 15, consisting of a matron and 18 sisters—this party was detained by the Germans after the German occupation and forced to nurse Germans. Another party went to Brussels on the same day, consisting of a matron and 121 sisters. In all six nursing parties of trained women went to Brussels before August 20. The next four parties were sent to Antwerp, then to La Panne and Furnes with a British Field Hospital (October 17), where, during the bombardment, one of the nurses had her bed smashed by a shell.

In France the British Red Cross Sisters were working from August 29, and so it went on as the bases changed; the list of rapid drafting of women to the places they were wanted most was almost monotonous in its regularity; telephone and telegram summoned them, and they appeared as if out of the earth.

The great devotion of the British Red Cross nurses at the Front in Antwerp, where the nurses remained until the city fell, escaping then through Amsterdam; in Dunkirk and Calais, where they had harrowing experiences; in Russia, where Miss Thurston was wounded; in Serbia, where two of them died of typhus; in Brussels, where they remained during the bombardment; and wherever they were sent, raised their prestige, if possible, even higher than before. Going and coming from military bases in this country and abroad, about 2,000 of these picked nurses spent themselves in the cause of their country. Many of them worked all day and all night; they stood the nerve-racking experience of nursing during bombardment of their hospitals; they remained calm with shot and shell falling round them; they accepted the most uncomfortable conditions, and proved the great value of trained devotion in the grim battle with death. The number of men saved to the nation by the Military Nursing Service and by them will not be known until, after the war, stock is taken of the work done. It is too soon to appraise them now.

It is interesting to note that the Queen in the early days of August suggested to the Directors-General at the Admiralty and the War Office that the sick soldiers and sailors should be sent as far as possible to convalescent homes nearest to their own localities.

The Voluntary Aid Detachments suffered at first from a confusion with certain women who took first aid and nursing certificates, and, after ten lessons in each departed for Flanders or France. These ladies, as has already been said, were presently sent home. The Voluntary Aid worker, who did such magnificent and humble work in the civil and military hospitals, is a very different person. She was willing to work under a trained nurse, to help in the wards like a probationer, fetching and carrying and making beds. In one V.A.D. hospital she and her colleagues did the entire laundry work—washing, mangling and ironing—and made neat little kit-bags to hang at the foot of each bed; in others they cooked and mended.

On March 26, 1915, the Director-General of the Army Medical Service asked all the civil hospitals with training schools to help the country still further by making every effort to train for three or six months as many probationers as possible, so that they might be available for work later on under supervision in military hospitals. This call followed an urgent intimation from the War Office, earlier in March, to all trained nurses holding certificates for three years' training to apply without delay to the Matron-in-Chief at the War Office. It was issued at a time when the Dominions had sent or promised contingents (eighty from Australia, thirty from South Africa, and sixty from Canada). It was plain that every woman of nursing experience would be needed when the war changed from its sullen winter aspect to the fiercer activities of spring.

The regulation that candidates for the Army service must have a certificate of training from a hospital of 100 beds was presently suspended, and candidates from hospitals of fifty beds were accepted if suitable in other respects. The age limit had been extended from thirty-five to forty-five. Accepted candidates were told they must serve for a year either at home or abroad as they might be required. For service in the home hospitals, nurses required by the joint War Committee as matrons, superintendents, or sisters, if healthy and fit for work, were accepted up to the age of fifty. Under the new rules there was full opportunity for retired or married nurses and nurses who had not completed their training to offer their services.

Besides these trained people it had been suggested that about 3,000 V.A.D. members, carefully chosen and certificated, would be needed in the military hospitals, and a board of selection met at Devonshire House, where only those with certificates of three years' work in their detachments and nominated by their commandant and county director were looked at. Most of the hospitals had already been helping by taking in a V.A.D. member in each ward, but they met Sir Alfred Keogh's wishes as far as possible, though it meant a great deal of extra work for the Sisters. Bart's issued a scheme next day for a course of three months' training.

Every possible woman trained or partially trained was mobilized and called up as the pressure on those already employed became greater. As soon as they were needed the V.A.D. members were sent to the various military and Red Cross hospitals; they signed on in most cases for six months; their discipline was excellent, and they won everywhere the highest praise for their willing efficiency; those who had had three months' hospital training acted as a kind of nursing orderly. In the Territorial hospitals in particular the scheme worked smoothly; they were given the same privileges as trained nurses and had a sufficient time off duty. When chosen in this way the V.A.D. members were subject to military discipline. Some were drafted to France under War Office orders.

The work of the county branches of the British Red Cross Society is one that would

MEDICAL UNIT STARTING FOR SERBIA.

need a volume to itself. War tested the work that had been done during peace time and let it be seen that ridicule had had no effect in lessening efficiency. The Duchess of Devonshire exercised her great organizing capacities in Derbyshire; Lady Falmouth stirred up unguessed activities in Cornwall; Lady Winchester in Hampshire; the Duchess of Norfolk in Sussex; the Duchess of Beaufort in Bristol; the Duchess of Portland in Nottingham; Lady Lansdowne in Wilts; Lady Bell, Lady Herries, and Lady Harewood in Yorkshire; Mrs. Bacon in Norfolk; Lady Ampthill in Bedfordshire; Mrs. Benyon in Berkshire; Mrs. Pryse Rice in Carmarthen; the Hon. Mrs. Arthur Sandbach in Montgomeryshire; Lady Talbot de Malahide in County Dublin; Lady Aberdeen in Dublin; Lady Venables-Vernon in Jersey—all produced consistently good results in their several districts. Hospitals were ready and staffed in the shortest possible time; it was described as mobilization by magic. It was from many of these counties that the V.A.D. members came who were drafted to the military hospitals.

Of the many women who helped the British Red Cross Society it would be difficult and almost invidious to choose any names in particular. Queen Amélie of Portugal worked indefatigably at Devonshire House in the early days of August as checking clerk. Lady Dudley and Lady Gifford were also busy in those early days; Lady Sophie Scott, Lady Beatrice Pole-Carew, and other Society women worked long hours packing and sorting medical requirements in the supply department at 83 Pall Mall. Hundreds of women gave their time and their money and effaced themselves in dull routine work to help the machine along.

[Speaight.

THE DUCHESS OF NORFOLK.

DUCHESS OF DEVONSHIRE,
President of the Derbyshire branch of the British Red Cross.

After nine months of war the Queen Alexandra Relief Fund for War Nurses was started to help those who had suffered mentally, physically, or pecuniarily from or in consequence of attendance upon the sick and the wounded during the war. It was not intended to apply to nurses on the staff of the Army or Navy Reserve, Territorial Forces, or Territorial Forces Reserve, as these were already provided for. The nurses who were expected to benefit were those employed during the war by the Order of St. John, the British Red Cross Society, or the Joint Committee of both bodies, or who had worked under their sanction. Many nurses threw up lucrative private connexions to take a small salary under the Red Cross because they knew their skill would mean the difference between life and death for many wounded men. It was only fair that their position, if their health broke down, should be made secure for them. However, in spite of this and the large sums of money subscribed, nurses were not entirely pleased with the Fund, which they regarded as a charitable enterprise while their work had been a national one.

The work of the women doctors from the beginning of the war was of great value to the

State. It was performed with extraordinary competence and with equally commendable modesty. In peace time the women doctors had a strong and old-fashioned prejudice to contend against. The belief that nursing was womanly, but that the practice of medicine and surgery was not, died hard. But the war killed this remnant of early Victorianism

[Speaight.

LADY BEATRICE POLE-CAREW.

effectually. The visits of the Queen, the Princess Royal, the Duchess of Albany, Princess Alexander of Teck, and Princess Arthur of Connaught to the London School of Medicine for Women (Royal Free Hospital) in the early part of 1915, and the fact that Queen Mary went over every part of the building, not even neglecting the dissecting room, set the seal of Royal approbation on this great career for women. Her Majesty at a later date allotted a portion of the gift of the women Freemasons to paying for the training of a woman medical student. This was a splendid milestone in the history of women in medicine.

Directly after war broke out women's voluntary medical units were formed. The first of these was the Women's Hospital Corps under Dr. Flora Murray and Dr. Louisa Garrett Anderson, which, by reason of its small size (it only included twenty members, doctors, nurses, and orderlies, four of the nurses being men) was able to get to work before any of the bigger units could do so, hampered as they were by the need of larger quarters. This women's unit, privately equipped, found quarters at Claridge's Hotel in Paris, and got to work at once under the auspices of the French Government. Very shortly after a women's unit was organized by the Women's Imperial Service League and sent to Antwerp. Mrs. St. Clair Stobart was commandant, and the medical women were Dr. Helen Hanson, Dr. Florence Stoney, Dr. Joan Watts, and Dr. Mabel Ramsay. They were under the Belgian Red Cross, and though they were actually at work for only a fortnight, owing to the sudden fall of the city, they did some splendid work. They were among the last civilians to leave, and, as they departed, riding on the top of a London motor 'bus filled with ammunition, the city was shelled incessantly, and they only succeeded in crossing the Scheldt a few moments before the bridge was blown up.

Meantime, the work of the Women's Hospital Corps had been arousing the admiration and interest of those who were controlling the British Medical Department at the base. Lord Esher spoke in the highest terms of their work, and they were asked to start a hospital of 200 beds at Wimereux, which afterwards amalgamated with the Royal Army Medical Corps. Paris had become too much the centre of military operations for it to be possible to continue much hospital work there. And the work of the corps at Wimereux led to the offer from Sir Alfred Keogh of the organization of a women's military hospital in London of 550 beds. To undertake this some of the staff came over from Wimereux. The hospital was established in the old St. Giles Union at Endell Street, where very extensive alterations were

DR. FLORA MURRAY.

SCOTTISH WOMEN'S HOSPITAL—AT THE ABBAYE DE ROYAUMONT.

made and the whole place was thoroughly equipped on the most modern lines. Dr. Amy Sheppard was appointed ophthalmic surgeon and Mrs. Handley Read dental surgeon. The members of the medical staff were graded for purposes of pay in the same way as the ordinary male members of the R.A.M.C. The nurses were attached to Queen Alexandra's Imperial Nursing Service, and the innovation of women orderlies was a feature of the organization. The doctors and nurses adopted the same uniform they had worn in Paris—a practical coat and skirt of covert coating with red cuffs and shoulder straps for doctors and blue ones for orderlies. The nurses wore a short floating veil to their hats when out of doors, and they became quite familiar figures at many charitable matinees, shepherding platoons of wounded but convalescent Tommies in blue hospital suits to the seats generously bought for them on these occasions by friends of the hospital.

The arrangements of the new hospital vied with its prototypes in perfection of equipment and smooth working, and there was a large club-room in which concerts and entertainments could be held for the more convalescent.

Another group of women doctors, known as the Scottish Women's Hospitals, first organized by the Scottish Federation of the National Union of Women's Suffrage Societies, did a great deal of work in France, and in Serbia. Nearly £40,000 was collected by women, and mostly from women, for these Scottish hospitals. Dr. Inglis, of the Scottish Federation, initiated the scheme. The first medical work begun in connexion with these hospitals was at Calais, where Dr. Alice Hutchison was invited to take charge of an annexe to a fever hospital for Belgian soldiers; the invitation came from Dr. Depage, the great Belgian doctor. Dr. Hutchison's annexe was soon known to have the smallest percentage of deaths from typhoid of any hospital in Calais. In order to have as much accommodation as possible for serious cases she started in connexion with it a convalescent home at Rushard.

The first complete unit to go abroad went in charge of Dr. Ivens. It took up its quarters at Royaumont, a castle of great architectural beauty, a place of vaulted corridors, Gothic arches and cool cloisters, built, according to some, by Blanche of Castile, according to others, by St. Louis. It had once been a monastery and later a convent. Since the nuns were expelled from France ten years ago, the castle had been unoccupied and fallen into disrepair. It was thus that the unit found it, somewhat to their dismay, for labour in France was difficult to obtain, and the cleaning had to be done to a great extent by members of the unit. It was some time before proper arrangements could be made for hot water, lighting, and sanitation. It was decided to organize the hospital in four wards of twenty-five beds each, to be called after Millicent Fawcett, Blanche of Castile, Joan of Arc, and Margaret of Scotland. Other wards were organized later, one of which was called after Queen Mary.

When arrangements were complete, the hospital was inspected and recognized by the French Government as "Hôpital Auxiliaire 301." The X-ray equipment which the women brought with them was the only one in the neighbourhood, and cases were brought from everywhere around so that bullets and pieces of shrapnel might be accurately located. The hospital was so near the firing line that wounded could be brought straight from the Front. The unit was provided with motor ambulances driven by women.

The French countryside took a keen interest in what was going on at the old château of sinister legend, now turned to benevolent uses. On Sundays they were allowed to flock in and see things for themselves, and if anything was wanted in the way of a piece of furniture they tried to supply it. They took it very kindly that British women should go and nurse their wounded. More formidable were the visits of officers of high rank, with courteous invitations to lunch, at which questions of precedence loomed large, and speeches and compliments were the order of the day. The fact that Mrs. Harley, sister of Sir John French, was administrator, added prestige to Royaumont.

A practical proof of the value of the unit was shown in the fact that a special request was sent down from the military authorities that they should take the most serious cases and discharge them immediately they were convalescent.

The French authorities asked for an extension of the hospital work, and Royaumont presently doubled its strength. Further, a field hospital, afterwards the fourth unit, was equipped and sent to Troyes near the Front, where large hospital tents provided accommodation for 200 patients in the park that surrounds Château Chanteloup. Dr. Louise McIlroy and Dr. Laura Sanderman were in charge, and Dr. Ellen Porter was the bacteriologist.

The third unit was sent to Serbia, suffering from its third war. The darkest stories of hospital work came from there. It was said that 50 per cent. of their patients had died, so terrible had been the scourges of disease. The Serbian Government received with enthusiasm the offer of help of the Scottish Women's Organization. It agreed to pay the salaries of the members of the unit and the cost of maintenance. The equipment, of which there was practically none in Serbia, was provided from this country. As soon as the unit, in charge of Dr. Soltau, arrived at Kragujevatz, it was given a hospital with 250 beds.

Letters revealing the sad state of the country were presently received, preceded by wires asking for more doctors and nurses.

"The trouble now," wrote Dr. Soltau, "is the terrible number of cases of fever—typhoid, typhus, relapsing fever, and in some places

SCOTTISH WOMEN'S HOSPITAL—ORDERLIES.

[*From the drawing by Sargent.*

MARCHIONESS OF CREWE.
Chairman of the Central Committee, Women's Employment.

small-pox. The Austrians left behind them hundreds of sick people, and there are hundreds of Serbs ill, and more cases coming in every day from the lines."

Well-known golfers sent out an appeal for funds for beds in the new Serbian unit, as a memorial to Miss Neil Fraser, the woman golfer who died of typhus in Serbia. The appeal ends with the words, "At her funeral, which was conducted according to the rites of the Greek Church, with full military honours, a little Serbian lady, overwhelmed with grief, was heard to murmur in her foreign accent, 'It is noble—so noble. To give one's life for *la Patrie* is fine, but to give it for the country of another is incredible.'"

Dr. Inglis, working indefatigably for the cause of the wounded, collected enough money to send a second complete unit to Serbia, and soon a third was on its way under the direction of Dr. Alice Hutchison, whose career has specially fitted her for dealing with epidemics of all kinds. She had been through a cholera epidemic in India, served in a former Balkan war, and dealt at Calais with the typhoid epidemic among Belgian soldiers. Money was collected for other units, of which the London Society of the N.U.W.S.S. supported two.

When the third Serbian unit arrived at Malta it was unable to proceed at once as it was requisitioned by Lord Methuen for service amongst our own wounded troops, who were expected from the Eastern theatre of war before an adequate medical and nursing staff could reach Malta from England. The women were delighted to be able to look after their own men, and when the unit finally set sail for Salonika there was much sorrow amongst the "Tommies" at their departure.

Besides these hospitals, medical women served with the Wounded Allies' Relief Committee; they worked with a mixed unit (men and women) of the Belgian field hospitals; in a mixed unit with Mr. Berry, of the Royal Free Hospital, which went out to help the Serbian Government; in a mixed unit at St. Valéry, and other places. Dr. Hilda Clark worked with a mixed unit, formed by the Society of Friends, for the treatment of the civil population in France in the devastated areas.

The war made a great difference in the demand for women doctors. They were appointed for the first time to many resident posts where it might reasonably have been expected that they would have been accepted before. These new appointments included two women residents in the Great Ormond Street Children's Hospital; two at the Children's Hospital, Tite Street, Chelsea; one at the Chelsea Hospital for Women, and one at the Female Lock Hospital. None of the visiting appointments were, however, opened to them; the war could not break down this male monopoly. A woman Assistant Medical Officer of Health was appointed at Manchester, but this appointment was expected before the war. The scope in private practice became very great: many women acted as *locum tenens*

LADY ROXBURGH.
Hon. Secretary of the Queen's "Work for Women" Fund.

[Hoffman. [Lambert Weston. [Thomson.

MRS. GASSON. MRS. AUSTEN CHAMBERLAIN. VISCOUNTESS MIDLETON.

for men gone to the Front, and patients with a prejudice went to them as a war-sacrifice and found that skill had nothing to do with sex. There were about a thousand women on the register, and many who had retired came back to practice to assist some public authority, hospital, or private practitioner. Before the war there was a shortage of men, and the death of many self-sacrificing men at the Front and the enlistment of many male students made the adoption of medicine by young women where their means and their talents allowed it, a national duty. Dr. Mary Scharlieb on December 5, 1914, wrote a letter to the *Times* on the subject of medicine for women, in which she said:

> May we not hope that when this urgent demand for women doctors is realized by the public many women of good birth, education, and ability will be desirous of entering the medical profession? It is certain that all such women cannot, and do not, expect to marry, and that in default of this most natural and desirable condition of life some women must seek other spheres of usefulness. From an experience of medical life now verging on 40 years, I venture to think that no career could offer greater happiness and satisfaction to a woman, nor greater opportunities of practical usefulness, than

QUEEN'S "WORK FOR WOMEN" FUND.

A Power-winder for expediting the winding of wool for making socks.

[*Lafayette.*

MISS MARY MACARTHUR,
Hon. Secretary, Central Committee, Women's Employment.

medicine. I should like to point out that women medical students need not of necessity be very young. The more mature woman has certain great qualifications for the task; her verbal memory may not be so strong as that of her juniors, but her trained mind, experience of life, and general *savoir faire* are of considerable service to her as a student and still more as a practitioner.

That women are capable of rendering efficient professional aid is proved by the fact that at the present time several hospitals officered entirely by women are at work in the theatre of war, and that the services of these medical women are much appreciated by their professional brethren and by their patients.

The hint was taken and the register of the London (Royal Free Hospital) School of Medicine for Women was so quickly increased that new buildings had to be planned, and the Duchess of Marlborough became treasurer of the extension fund. The medical schools in Manchester, Dublin, Edinburgh, and other places, also showed a speedy increase in the number of women students.

In the early days of August unrest throughout the country was described as the confused rushing of the unprepared to meet the unimagined. There was a terrible amount of unemployment amongst women; it dated from the August Bank Holiday that was spent very dismally in glorious sunshine by thousands of workers with a minimum of money for pleasure or play. Women had been largely employed in luxury trades; they were very badly organized, principally because as a group they had always been badly paid. There never had been any index number in regard to women's unemployment; the State had hitherto attempted to meet its obligations by sporadic assistance, but the fact that there could be an enormous amount of suffering owing to trade depression and dislocation was left to be discovered in the Great War. In the months of September and October, 1914, when only a relatively small percentage of men were registered at the Exchanges as unemployed, the percentage of women standing idle was three times as great.

The position was saved by the Queen. Her swift grasp of the dislocation of labour in its early stages and her knowledge of many phases of women's work and pay were brought to the help of women who were summarily thrown out of employment.

This was the Queen's message to the women of Great Britain:—

In the firm belief that prevention of distress is better than its relief, and that employment is better than charity, I have inaugurated the Queen's "Work for Women Fund." Its object is to provide employment for as many as possible of the women of this country who have been thrown out of work by the war.

I appeal to the women of Great Britain to help their less fortunate sisters through this fund.

MARY R.

The appeal was unique; it voiced the spirit of working women who object to charity and doles and who wanted work. It was followed by the calling together on August 20 by Mr. Herbert Samuel of a standing committee "to consider and from time to time report upon schemes for the provision of work for women and girls unemployed on account of the war." It was composed as follows:—

Lady Crewe (Chairman), Mrs. H. J. Tennant (Treasurer), Mrs. Alfred Lyttelton, Mrs. Austen Chamberlain, Lady Midleton, Lady Askwith, Miss Margaret Bondfield, Miss Violet Markham, Miss Susan Lawrence, Dr. Marion Phillips, Mrs. Gasson, Miss R. E. Lawrence (of

[*Lafayette.*

LADY ASKWITH.

the Unemployed Body), and Miss Mary MacArthur (Hon. Secretary).

Her Majesty the Queen was in daily touch with this Committee; she followed its workings with the greatest care, and she visited the scenes of its activities, its workrooms and centres for training, inquiring into everything with wise and kindly interest.

The business of the Committee was to devise and examine schemes of employment for women in England and Wales, and to submit them to the Government Committee for the Prevention and Relief of Distress. In all big schemes in which public money is used there is plenty of red tape, but in this there was the minimum; the needs of the working women were paramount, and the women who were dealing with them knew their ground. When the Government Committee expressed its approval—generally a very speedy matter—a grant was made out of the National Relief Fund for the purpose. This grant came from that part of the Fund ear-marked as "Queen's Work for Women Fund," this being the money that had come in response to that appeal and was paid into the National Relief Fund for the sole use of the various projects and relief purposes for women.

HON. MRS. ALFRED LYTTELTON.

The Committee began their work in rooms lent for the purpose by Lady Wimborne at Wimborne House, Arlington Street. Presently they outgrew this accommodation and were glad to take advantage of Lady Clementina Waring's offer to place No. 8 and 9 Grosvenor Place at their disposal. Other large houses, including 138 Piccadilly (lent by Mr. H. J. King) and No. 12 Park Street (lent by

THE QUEEN'S "WORK FOR WOMEN" FUND.

Mrs. Pearson receiving contributions at the Headquarters, 33 Portland Place, London, W.

[*Ernest Brooks.*

H.R.H. THE PRINCESS MARY.

Mr. Atholl Thorne), were also placed at the disposal of the Committee.

The main executive functions of the Committee were classified as follows :

I. Employment of Women under Economic Conditions.

(*a*) To assist the proper distribution of work available for women in normal industry, and to facilitate the provision of alternative employment (not entailing loss of skill) for skilled women workers displaced owing to the war.

(*b*) To promote new openings for permanent employment under economic conditions.

II. Relief Work.

(*a*) To lay down the lines on which the Central Committee would be prepared to approve schemes for the provision of work for women unemployed owing to the war, submitted by Local Representative Committees and to be administered by them.

(*b*) To consider actual schemes submitted for approval by Local Representative Committees, and, after approval, to supervise their administration.

(*c*) To promote and administer experimental schemes approved by the Government Committee, under which work is provided for women displaced owing to the war.

In their subsequent interim report (presented March, 1915) it was stated that throughout their operations the Committee have realized that it was better that workers should be self-maintaining than dependent upon relief, even when that relief was given in the form of work ; that this consideration was of especial importance in regard to unemployment due to the war, since the effect of the war might be to diminish the net demand for labour rather than to shift the demand into new channels. In the dislocation of industry which led to the appointment of the Committee the unprecedented slackness in one trade or a part of it co-existed with almost equivalent over-pressure in other parts of it, or in other trades, the resultant problem being one of the adaptation, as far as possible, of unemployed firms and workers to new and imperious national needs.

The Committee considered it to be their duty to use such opportunities as were given to them to increase the number of firms and

THE "THREE ARTS" WOMEN'S EMPLOYMENT FUND.

Making respirators for the troops.

COMFORTS FOR THE TROOPS.

Mlle. Favre, the Countess Nada Torby, Miss Barclay, and the Countess Zia Torby. The Grand Duke Michael of Russia and his daughters set out to collect 500,000 pairs of socks and mittens for the troops at the Front.

workers participating in the supply of Government requirements, and for this purpose they created a special Contracts Department, under the direction of Mr. J. J. Mallon. This enabled them

1. To advise in regard to the placing of contracts so that unemployment may be prevented or minimised.
2. With the same object in view, to undertake orders for certain articles from Government and other sources, such orders being carried out:

(*a*) By firms adversely affected by the war.

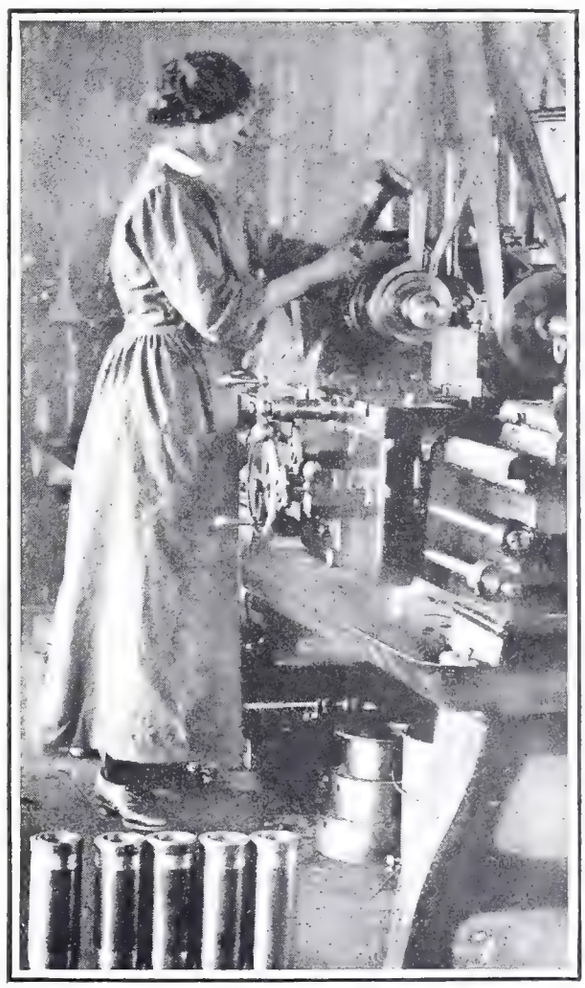
(*b*) In workrooms organized by the Committee on a self-supporting basis.

The early efforts of the Committee in regard to the lessening of unemployment among makers of men's clothing had an interesting and useful outcome. It was found that relatively few wholesale clothing firms were accustomed to manufacture military garments, and that other such firms were hampered in attempting to do so by the technical difficulties presented by the existing models of Army Service Dress.

At an interview which was readily granted by the War Office authorities, certain modifications of these models were suggested and were immediately approved. The changes removed the difficulty in manufacturing to which attention had been called, and thereafter full employment in the tailoring trade coincided with a greatly improved supply of Army clothing.

Contracts in London and the provinces were early secured from the War Office for khaki cloth, blankets, and various kinds of hosiery for manufacturers who would otherwise have had to close down.

In the hosiery trade the Queen gave a large



MAKING SHELLS IN A MUNITIONS FACTORY.

[*Lena Connelt.*

DR. MARION PHILLIPS.

amount of employment by entrusting the Committee with the purchase of woollen belts to form part of the Queen's gift to the troops. In executing the command of Her Majesty, the Committee were able to place orders for wool with spinners whose staffs were only partially occupied, and in the actual making of the belts to provide employment for workers similarly situated, and for a considerable number of women in Kidderminster, Belfast, Stroud, and elsewhere already out of work. The yarn was largely obtained from firms previously engaged in the production of yarn for carpets, and assistance was thus given to an industry which suffered severely on the outbreak of war. One of those who benefited by this contract was an enterprising London wholesale dressmaker who found herself with 100 workwomen and no work, as the war had caused an immediate economy in clothes. She tendered for a number of belts and, when her tender was accepted, bought a number of small machines and wool and set to work to train her staff to a new occupation.

The work done through trade workshops was also considerable, and kept many small firms throughout the country alive that would otherwise have had to relinquish their business. The greatest care was taken not to disorganise trade, and the work was only undertaken where the ordinary trade was fully employed. Two typical contracts were for 20,000 cut-out shirts, received from the Royal Army Clothing Department, and for 2,000,000 pairs of Army socks

[*Langfier.*

MISS MARGARET G. BONDFIELD,
Member of the Central Committee, Women's Employment.

LUNCHES FOR THE POOR.
At the East London Federation of Suffragettes, where lunch is supplied for twopence.

from the War Office. In carrying out the former, the Central Contract workroom at 138 Piccadilly, where tests and experiments were made, proved of great value in standardizing time, cost, etc., for the other workrooms. Over 130 firms were given contract work.

When testing new openings for trades, the Committee always kept in view the fact that the transference to Great Britain of a trade which had flourished in Germany was not always a simple matter. The result of their deliberations ended in the investigation of the conditions of manufacture of stuffed toys and wooden toys, the making of china dolls, artificial flowers, baskets, bon-bon bags, boot polish, brushes, crochet buttons, fireless cookers, gloves, Japanese cot quilts, hair nets, memorial wreaths, nets, polished wood fancy articles, potash (from seaweed), slippers, stockinette

MRS. PANKHURST
Addressing a meeting at the London Pavilion on the subject of War Service for Women.

knickerbockers, surgical bandages, tapestry and tinsel scourers, gold beating, weaving of willows for mats, chairs and baskets, and leather work. They financed two small schemes in fruit preserving and pulping at Studley and a back-to-the-land scheme for factory girls at Radlett.

In deciding what types of employment should be permitted in relief workrooms, the Central Committee were guided by two main principles —that the product of that employment must not compete in any way with ordinary industry, and that the work must be of such a nature that it should maintain and, if possible, improve the efficiency of the women employed. Only to women who had had employment previously was work given.

In its relief work the greatest problems the Committee and its sub-committees had to face were the dangers that if they gave work that was reasonably paid to these poor women they would almost inevitably attract to their funds thousands of women in the sweated trades who were still straining and starving, and the further problem that if they sold the result of the women's work they would injure trade. To help the women and at the same time keep trade normal was their work. The criticisms were many. There were people who objected to the women in training and in the workrooms being paid only 3d. an hour; there were people—happily they were few—who thought a maximum of 10s. a week (later increased to 11s. 6d.) too much, and that a rigorous discipline of fines for non-punctuality should be maintained in the workrooms. There were others, too, who thought that by not selling the work made in the workrooms they impaired the efficiency of the worker, who could only keep at her best when she was working against time on something that would be subsequently sold. The gradual operation of the scheme, however, did away with much criticism; the workrooms were opened on the principle that 3d. an hour, though by no means possible as a standard rate of pay, and 10s. for a forty-hours' week, though by no means an ideal wage, were the fairest pay possible which would allow of the greatest number being helped; and the products of the work done in the various experimental workrooms—cradles, layettes, and children's clothing—were distributed in homes where such necessaries could not possibly be obtained.

Experimental workrooms were started in Piccadilly, Bethnal Green, Stepney, St. Pancras, Hackney, Camberwell, and Shoreditch; domes-

LADY JELLICOE (on the left)
At the Union Jack Club for Wives of Soldiers and Sailors at Pentonville.

TO FIGHT POISON FUMES.
Making respirators for soldiers at the Front.

tic economy training centres in Bethnal Green, Stepney, St. Pancras, and Islington.

Over 300 branches of the Queen's Fund were established throughout the country. Many local representative committees for the prevention and relief of distress in different parts of the country started schemes on the lines of the experimental ones in London. These had been intended mainly as examples and illustrations to local representative committees, upon whom or upon whose women's employment sub-committees lay the duty of providing occupation for unemployed women on lines approved by the Central Committee. These local representative committees had to show that unemployment was abnormal and was due to the war, and to satisfy the Government Committee that there was genuine and special need for a workroom in the district in question.

Grants were made outside London to districts of such different needs as West Ham, Southampton, Barking, Leyton, Ilford, Walthamstow, Birmingham, Burnley, Tottenham, Middleton, Chipping Wycombe, Reading, Bacup, Exeter, Edmonton, Tynemouth, Eccles, Cardiff, and Willesden. There was accommodation for 1,400 women in these rooms.

In the early months of the war in the twenty-nine boroughs of London different kinds of women workers were affected. In Chelsea it was the young dressmakers in the big houses who had been doing fine work, making evening dresses no one wanted to buy. Over 50 per cent. of them were unemployed, and of those still employed the greater number were on part time. In Westminster it was the middle-aged women who lived up high stairs in lonely little rooms in solitary, shabby gentility—waistcoat workers, theatrical dressers, small dressmakers —who suffered most. In Battersea tailoresses and dressmakers were affected. In Bethnal Green it was the cabinet-makers. In Shoreditch over a thousand French polishers, box-makers, charwomen, and kitchen-hands of small eating-houses were without work. In Hoxton it was the cleaners who were out of work. In Islington, Finsbury, and Holborn, upholsterers, jewellers, book-cover and cardboard makers, shop assistants, clerks, etc., were thrown out of employment in hundreds.

At most of the experimental workrooms, little garments for layettes for East-end mothers, and cradles made from banana crates, were manufactured. Strangely-assorted groups of women to whom the needle was an unknown implement—thanks to the flood of cheap

German clothing that was to be bought everywhere before the war—were to be seen: from trouser-finishers, box-makers, French polishers, waitresses, hop-pickers, and workers of a rougher kind, to typists who, not being particularly efficient, had been dismissed in the early weeks of the war. The midday meal, prepared by a number of the workers receiving a training in domestic economy, who changed places week about with the sewing women, cost 3d. and included a cup of tea and slice of bread later in the day. All of these rooms were in direct touch with the Labour Exchanges.

A form of training for the elder women, the benefit of which had been already felt and will be felt more, was that of home-help. The women for such training were carefully chosen, as they would take the mother's place in the poor East-end homes, and large demands are made on their sympathy and their tact. Having been always poor themselves they could spend the family funds to the same advantage as the sick mother. Seamstresses, factory hands, and domestic workers were trained for this work.

The terrible disturbance in the labour market put a very valuable weapon in the hands of those who had the interests of the young women of the future at heart. Inefficiency, the frequent handicap of the young girl worker, can be modified in some trades, and, with the object of accomplishing this, a number of training schemes, which could be reproduced on somewhat similar lines throughout the country, were formulated. Only those women and girls were selected who were willing to go through the whole course and who would be likely to benefit by it. They were paid the same amount that they would have had if working in one of the workrooms.

"TIPPERARY ROOMS" AT HAMMERSMITH.

Making Garments for the Troops at the Front. Inset: Mrs Lloyd George visits a club for soldiers' wives at Camberwell.

WOMEN AS BUTCHERS.
At a shop at Wood Green, London; and Miss Eva Fenton at work in a meat-store; Delivering Meat to Customers (bottom picture).

A polytechnic for City workers at the New Bridewell was one of the most interesting of the training schemes to be put into operation. The City Fathers showed a special interest in a scheme for City workers; they gave Bridewell House, the old "house of correction for persons of either sex sentenced by the City magistrates to imprisonment for terms not exceeding three months," and with it the services of a resident caretaker and sum of money for putting the place in order, buying furniture, and so forth. Nearly 700 girls of this class were on the books of St. Bride's Institute, and 53 of these, having others dependent on them, were chosen for the benefits of this scheme. The selections were made from those recommended by the Typists' Registry, established by the Prince of Wales's Fund in the City, or by the local representative committees of the Borough Councils. L.C.C. teachers gave lessons in shorthand, typing, book-keeping, and French to the young typists, and a certificated dressmaker taught them to cut their own patterns and make their own clothes. The hours of training were forty per week, the same as those of the workrooms, and each girl was paid 10s. a week and a travelling allowance not to exceed 2s. 6d. a week.

This attempt to improve the equipment of girl typists represented the extent to which it was possible to relieve the professional classes amongst women on the part of the Central Committee. The Professional Classes Sub-Committee dealt with the position of both professional men and women.

At Deptford a training scheme for unemployed girls under seventeen was started. Large numbers of girls in this neighbourhood, many of them daughters of casual labourers, between the ages of fourteen and seventeen, who were usually employed in factories, in dressmaking and in daily service, were unemployed. They were too young for the ordinary workrooms and, having once left school, nothing would induce them to go back. And as they had been contributing to the support of their families some scheme by which they could earn money had to be formulated.

A maintenance allowance of 4s. a week for girls from fourteen to sixteen, and 1s. a day for girls of sixteen, was given to those in training, in addition to meals. During the mornings they were taught to make their own clothes, to make underclothing and rag dolls. In the afternoon, on five days a week, teachers

supplied by the L.C.C. gave classes in cookery, dress-cutting and making, home nursing, English, singing, and drilling.

Similar experimental schemes were tried at St. Pancras, Southwark, and Lewisham.

At the Islington Domestic Economy Centre one of the most interesting classes was that devoted to the cutting out of paper patterns. Here the girls were taught to make patterns to fit themselves, and they learnt the principles underlying the proportions and how from the one pattern various garments may be made.

At this domestic economy centre the Queen was profoundly interested in the various classes, watching the girls at their laundry work and their cooking, and making those minute enquiries from the workers themselves which prove the intimate and personal knowledge Her Majesty has of every department of housewifery. The girls taking this course had been packers, bookbinders, corset-makers, hair-preparers, nursery governesses, and blouse improvers. This Islington centre was one of the Mayoral enterprises, and all the local ladies and tradespeople were very kind to the girls; some of the tables were presented by the local undertaker, and were really coffin-lids, and all the basins, etc., were supplied and fitted free.

Later on a scheme for training girls in leather work was put into operation at the Cordwainers' College, and another at Hammersmith for training women as grocers, a special shop having been fitted up under the auspices of the L.C.C.

The Central Committee's schemes were in many instances taken as models in the provinces, even for schemes supported by local funds, and members of local representative committees came from all parts to see what was being done in London. The schemes adopted in the provinces included a considerable amount of training, particularly in cooking. And the value of training at such a time could not be too strongly insisted upon. Birmingham taught the making of rag-rugs; High Wycombe chair-seat willowing; Burnley gave training as home-helps.

Though emigration was practically at a standstill, as the Colonies were feeling the war sufficiently not to desire any additional seekers for employment, Australia made the Queen an offer for her fund. Those who accepted the offer had to give an undertaking to go into domestic service for one year.

Four States—Victoria, New South Wales, Queensland and Western Australia—offered to accept girls, untrained as well as trained, at a reduced passage of £1 down and £2 to be repaid in instalments; and New South Wales further invited young widows with children. The Queen was greatly interested in the offer, and herself appointed a sub-committee of the Queen Mary's Work for Women Collecting Committee to see what advantage could be taken of it and

POLICEWOMEN IN LONDON.
Guarding works of art in an Exhibition; and a Member of the Force in Bow Street.

TELEGRAPH MESSENGER
At Steyning.

satisfactory conditions were laid down by which 550 girls could go out practically free of charge.

The Central Committee obtained a grant from the Queen's Fund of £1,100, which would pay the preliminary £1 and give £1 to each girl as pocket-money on arrival. But this was not all; a very excellent outfit, part of it made at the Queen's workrooms and part of it given out to firms in need of employment for their women workers, was provided for each one; it consisted of a trunk containing four sets of underclothing, two print dresses, two overalls, four aprons, a coat and skirt, an afternoon dress, a shirt blouse, an ulster, three pairs of stockings, six handkerchiefs, a pair of boots, a pair of shoes, one rough towel, two face towels, a brush and comb, and a toothbrush. Applications for these passages were made through the British Women's Emigration Association, Imperial Institute, South Kensington, and the applicants had to pass the test of age and medical fitness required by the Australian Government. The age was fixed at eighteen to thirty-five for those who had had previous domestic experience; at under twenty-four by New South Wales for those who had not been in service before, and for Victoria at twenty-one. References were, of course, required as to characte..

The Queen was in daily communication with Miss Mary MacArthur and the members of the Central Committee. She visited the centres frequently and informally, and made practical suggestions that were always to the advantage of the workers. And the splendid women of the Central Committee—the strangest grouping of different interests that had ever been seen on any committee before—worked most strenuously and most loyally with Her Majesty.

The value of the advice given by Miss Mary MacArthur, who for some years had voiced the claims of the working women with no little ability and had made herself peculiarly their representative, was perhaps one of the biggest assets the Committee possessed, and as such was appreciated by the Queen, who was an exceedingly shrewd judge of personal values.

When the Committee presented its interim report on March, 1915—the first time a body of women ever presented a report to Parliament—it was stated that "the personal interest which Her Majesty the Queen has graciously taken throughout in the many activities of the Committee has given a great stimulus to the work."

On the no less important side of the work—the gathering of money—the Fund had a Collecting Committee of hard-working ladies, whose energies were centred at 33 Portland Place, Lord Blyth's town house. H.R.H. Princess Alexander of Teck and H.H. Princess Victoria of Schleswig-Holstein were vice-presidents. Lady Crewe was chairman, and the membership included: Lady Askwith, Mrs. Asquith, Lady Bryce, Mrs. Austen Chamberlain, Lady Derby, Lady Ilchester, Lady Midleton, Lady Northcliffe, Mrs. Pearson (hon. treasurer), Lady Rothermere, Mrs. Leopold Rothschild, Lady Roxburgh (hon. secretary), Mrs. Arthur Sassoon, and the Duchess of Wellington. In the ninth month of working the fund had reached £154,596. Many kindly offerings came to swell the fund: a lady travelled second class to Australia instead of saloon, and sent the balance to the fund; a girl sent a lock of her hair; a fiancée whose sweetheart died at the front sent his ring; jewellery of many kinds came from women who had nothing else to send; a million and a half children collected for it.

As women were drawn back into the labour market, when the demand for them in connexion with Government contracts increased all

over the country, many of the work rooms were closed, though the training schemes were proceeded with.

When the early sewing and knitting activities of women throughout the country had reached fever heat one saw them in the trains and the tubes, in the restaurants, at charitable concerts, at public meetings, working as if their lives depended on it and as if the loss of a moment was a tragedy. It was evident that this abnormal production of articles—a certain amount of which would probably be of no practical value—was likely to compete very seriously with the work of industrial women whose business it was to do this class of work. Everywhere there were poor women with their hands idle and well-to-do women with their hands busy.

The Queen promptly saved the situation; herself a practical needlewoman, she realized that there was likely to be a big wastage of material on the part of the warm-hearted amateur working without guidance. The London Needlework Guild, of which Her Majesty was President, with its numerous branches, was already in existence, and the experience of its members invaluable; something on similar lines, for additional comforts for the soldiers and sailors, garments for the sick and wounded and clothes for poor women and children, was needed in the coming winter.

The Queen summoned a small committee to meet at Buckingham Palace. At this Princess Mary, Lady Savory, Mrs. Harcourt, the Hon. Mrs. Mallet, Miss Farquhar, Lady Lawley, Lady Dawson, Miss Halford, Miss Taylor-Whitehead, Lady Northcliffe, Lady Ampthill, Lady Bertha Dawkins, and Miss Allcroft were present. There also the first meeting of the Council of what was to be known as Queen Mary's Needlework Guild took place on August 10, at which Her Majesty, at her own request, sat as an ordinary member, Lady Ampthill being in the chair. Princess Mary was present, and also Lady Bertha Dawkins, Lady Lansdowne, Mrs. Asquith, Lady Northcliffe, Mrs. Hobhouse, Mrs. Harcourt, Lady Bathurst, Lady Dawson, Lady Hope, Mrs. Albert Spender, and Lady Lawley (Hon. Sec.). It was decided that work should begin immediately. Amongst the resolutions proposed and agreed to at this meeting were:

(1) That all presidents of counties in the United Kingdom should be asked to communicate with the Hon. Secretary of Queen Mary's Needlework Guild, St. James's Palace, S.W.

(2) That all presidents be asked to try, in addition to organizing working parties in their own divisions, to give employment, when possible, to those who, owing to the war, may find themselves in need of employment.

The King lent the Levee suite of rooms at Friary Court, St. James's Palace, for the activities of the Committee, and throughout the country, through the medium of the Press, a lead was given to women's voluntary labour. The following official statement, issued on August 21, 1914, intimated the Queen's wishes that the voluntary worker must not interfere with trade, and the suggestion that garments should be bought as far as possible in the shops was wisely acted upon, as was quickly made known to Her Majesty:

Queen Mary's Needlework Guild has received representations to the effect that the provision of garments by voluntary labour may have the consequence of depriving of their employment workpeople who would have been engaged for wages in the making of the same garments for contractors to the Government. A very large part of the garments collected by the Guild consists, however, of articles which would not in the ordinary course have been purchased by the Government. They include additional comforts for the soldiers and sailors actually serving, and for the sick and wounded in hospital, clothing for members of their families who may fall into distress, and clothing to be distributed by the local committees for the prevention and relieving of distress among families who may be suffering from unemployment owing to the war. If these garments were not made by the voluntary labour of women who

A POSTWOMAN
At Epsom.

are willing to do their share of work for the country in the best way open to them, they would not, in the majority of cases, be made at all. The result would be that families in distress would receive in the winter no help in the form of clothing, and the soldiers and the sailors and the men in hospital would not enjoy the additional comforts that would be provided. The Guild is informed that flannel shirts, socks, and cardigan jackets are a Government issue for soldiers; flannel vest, socks, and jerseys for sailors; pyjama suits, serge gowns for military hospitals, underclothing, flannel gowns and flannel waistcoats for naval hospitals. Her Majesty the Queen is most anxious that work done for the Needlework Guild should not have a harmful effect on the employment of men, women, and girls in the trades concerned, and therefore desires that the workers of the Guild should devote themselves to the making of garments other than those which would, in the ordinary course, be bought by the War Office and Admiralty. All kinds of garments will be needed for distribution in the winter if there is exceptional distress.

The Queen would remind those that are assisting the Guild that garments which are bought from the shops and are sent to the Guild are equally acceptable, and their purchases would have the additional advantage of helping to secure the continuance of employment of women engaged in their manufacture. It is, however, not desirable that any appeal for funds should be made for this purpose which would conflict with the collection of the Prince of Wales's Fund.

On August 31 it was announced that it had been arranged that a meeting of one representative each of Queen Mary's Needlework Guild, the St. John Ambulance Association, and the British Red Cross Society, would be held every Wednesday afternoon at St. James's Palace. At these meetings notes were compared to ascertain the special requirements of each Society. Lists were constantly supplied to the Press of the things most needed and counties vied with each other in supplying them. The work of packing, sorting, checking the contents of the flood of parcels was at first an almost overwhelming task, but presently it was organized out of chaos into order. The workers were all voluntary, and on that list of women who spent busy days at St. James's in doing what was monotonous if responsible work, there were many who were well known in Society who helped as if such work had been their business. There was no watching the clock; if a thing had to be done it was done. Soon the machine worked smoothly and the pressure upon certain people lessened.

There was a book kept at Friary Court, St. James's, which recorded the gifts received from Greater Britain and from allied and neutral countries with whom our tie was one of friendship. That book made brave reading; it recorded that beautiful old embroidered towels, family heirlooms, had been sent by Russian peasants; it told of gifts of native work from Zulu chiefs; it noted that from every State in the U.S.A. had come an offering from the women who felt they were at this time "kin-folk, kin-tongued."

There, too, was recorded the great generosity of the Chilean women in London in the gift that came through Madame Edwards; lovers of things beautiful, their gifts were typical of their taste, and many of their articles of clothing for women and children gave much happiness when distributed through the Officers' Families Fund to officers' wives and children. There were also gifts from Argentina, Athens, British Columbia, British North Borneo, Barbadoes Bermuda, Batavia, Buenos Aires, California, Cape Colony, Orange Free State, Natal, Rhodesia, Transvaal, Tembuland, Corea, Canada, Ceylon, Christiania, Channel Islands, Demerara, Dominica, Egypt, Federated Malay States, Fiji, Geneva, Hong Kong, India, Japan, Jamaica, Madagascar, Malacca, Mauritius, Malakand, Manchuria, Naples, New Zealand, New South Wales, Queensland, Victoria, Nova Scotia, Oporto, Penang, Perak, Rio de Janeiro, Russia, Singapore, Shanghai, Siam, Stockholm, Trinidad, Tasmania, Thursday Island, U.S.A. Beautiful things came from abroad. Branches of the Q.M.N.G. were everywhere. One in Canada sent most generously, and so did one in New York. The mayoresses of nearly every town in the Kingdom added to the record the enthusiasm of her working parties. In Belfast and Glasgow activities were ceaseless.

Numerous as the gifts were, the demand for them kept pace with their number. In ten months of working the gross number of articles received was 1,101,105; of this 1,070,887 were dispatched in about 2,600 requisitions. But though Friary Court was a great clearing-house for articles received from everywhere, it did not represent the total amount of articles made for the Guild and distributed. It was the Queen's wish that the branches of her Guild, which were formed throughout Great Britain and in every country where English was spoken, should be free to do as they wished in the distribution of the articles they collected; they might use them for local distress and local hospitals, or for regiments quartered in their neighbourhood, or send them abroad.

In all distribution, whether from headquarters or locally, great care was taken to ensure that a real want existed, that the clothing reached its proper destination, and that there was no overlapping.

Of the variety of the recipients of garments

LOADING UP TRUSSES OF HAY
At Studley College, Warwickshire, where women are taught every branch of Farming.

GATHERING IN THE HAY
On a Farm in Middlesex.

ON THE FARM.

Bringing out the Horses; Ploughing; and at Work on a Farm in Warwickshire.

the following list of the distribution in the first ten months gives some idea—the distribution varying from 21,000 to 50,000 per week:

	Garments.
744 regiments	425,050
304 hospitals at home	80,060
216 hospitals abroad (including Serbian and Dardanelles, 11,601)	140,899
Indian Fund	13,133
Royal Navy	35,909
35 camps	34,055
Forces in South Africa	3,082
Forces in East Africa (from Devonshire House)	3,000
Forces in Egypt (from Devonshire House) ...	9,900
Allied Forces	45,061
89 convalescent homes	13,406
Belgian Refugees	28,734
Officers' Families Fund	3,329
207 Soldiers' and Sailors' Families Association Committees	81,169
Committees of relief for helping women and children	155,264
Various	5,186
Prisoners in Germany	6,550

To say that the Queen took a strong personal interest in the work of the Guild is to express a truth very frigidly. Her Majesty was constantly at Friary Court, examining the kind of socks and shirts that were going out to the men, anxious that workers should know the things that were needed most—that the life of a sock to a marching man was but four days—that flannel was preferable to flannelette.

Every story of self-denial in connexion with the Guild reached her sympathetic ear; herself a good needlewoman, she knew that all were not, and that the putting in of a sleeve in a shirt was a matter of care. When a parcel of summer shirts was being sent to the Dardanelles, the Queen examined them and decided that they were not thin enough for hot-weather wear. The mother herself of young men, she knew their needs.

When the great pressure on the garment department ceased—though requisitions were still being received—the Queen suggested the formation of a surgical department, which was put in the hands of Lady Keppel. The same spirit of business organization was brought to bear on this department; there was nothing of the amateur in the making of bandages or dressings, or in the sorting or parcelling of them. Lady Keppel took lessons in the making of "T" bandages, many-tail bandages, roller bandages, round and flat swabs, and, above all, the little round plugs of cyanide gauze which takes a nurse such a time to make. Her volunteers sat through long summer days rolling bandages on little machines, cutting and sewing the complicated ones, and

deftly turning the little plugs much needed for this war of cruel wounds. Other helpers made shell dressings and the pneumonia jackets that brought comfort to poor fellows who were "gassed." In the quiet rooms, in mob caps and aprons, pictures of practical picturesque hygiene, these women worked quickly and deftly. Outside another worker sorted these things into packages that were sealed carefully, and as uniform in appearance as if they were the work of a professional packer. That was the spirit of the place—what was worth doing was worth doing well.

Throughout these difficult months Lady Lawley was indefatigable; to her organizing power, acquired in Madras and Western Australia when her husband was Governor of these districts, not a little of the running of the work on smooth businesslike lines was due.

Almost as unexpected, from a German point of view, as the action of the Irish in laying aside all thought of civil war was the patriotic stand of the suffragettes in spite of their grievances against the Government, their determined prosecution of propaganda in season and out of season, and the special legislation which had been directed against them.

When war broke out there were eleven suffragettes, members of the Women's Social and Political Union, actually in prison with sentences varying from two years to three months; they were all on hunger strike and most of them were being forcibly fed. Mrs. Pankhurst had just been released under the famous "Cat and Mouse" Act and was slowly recovering from the effect of hunger strike. Mr. McKenna announced an amnesty on August 10, and the eleven prisoners were set free. About a hundred other women were at large under the "Cat and Mouse" Act, the majority of whom had exceeded the period of liberty granted by their licence and refused to return to prison. Most of these women had been sentenced to terms of imprisonment ranging from three years to one week, while a few had been released, while imprisoned, on remand. It was at first assumed that the amnesty applied to these women as well as to those actually in prison, but the re-arrest a few weeks later of one of the "mice" forced the W.S.P.U. to seek a definite declaration from Mr. McKenna, and a deputation went to the Home Office on August 27. The Home Secre-

ON THE FARM.

Harvest time; sheep-shearing; and Flowers for the Market.

tary then stated that the amnesty did not extend to convicted prisoners at large, but that any such prisoner would be given the benefit of it on returning voluntarily to prison, and that during the course of the war no re-arrests under the Act would be made.

The release of the prisoners accomplished, the Union immediately abandoned without a single reservation the whole of its militant campaign and suspended the publication of its official organ, "The Suffragette," the last copy of the pre-war issue being dated August 7. This publication was resumed in April, 1915, when it appeared to its editor that it could be of service to the Government by insisting on the need for national service for both men and women and by a fighting patriotic propaganda that gave no quarter to anything that would hinder or impede the Government in its great fight against the European pest. The family quarrel on the subject of votes was laid aside.

The first act of Mrs. Pankhurst on recovering from the effects of her hunger strike was to deliver a stirring recruiting speech at the Dome, Brighton. Throughout the country through the vast linked-up organization the message was sent to the suffragettes to set to work in the way that lay nearest to them to help to bring the war to a successful conclusion. No special form of work was indicated—the only positive statement made from headquarters was that not to be helping was a disgrace. Every kind of relief work had members of the Union on its committee; the extraordinary ubiquitous energy which had proved a thorn in the side of the Government was now brought to its service; the ready wit and fluency which had made the Government candidate dread the appearance of the Union at by-elections was now used to cajole recruits and to shame shirkers. More than this, the most eloquent of all the suffragettes, the redoubtable Miss Christabel Pankhurst, who had been living in voluntary exile in Paris owing to the warrants for her arrest in London, like her followers, threw aside the thought of fighting against the Government at a time of national peril. Taking up the cause of the Allies, she went to America to hammer it home for four months and to stand heckling from the hyphenated American, who came in organized groups to her meetings to ask what he and she (for the American fräulein was much in evidence) thought inconvenient questions. Miss Pankhurst answered them neatly and effectively, and the "Ayes" had it in her tour through the States.

There were 600 women's suffrage societies

A PAGE GIRL
At a hotel in London.

A VAN DRIVER
In Kensington.

A MOTOR-DRIVER
In Kensington.

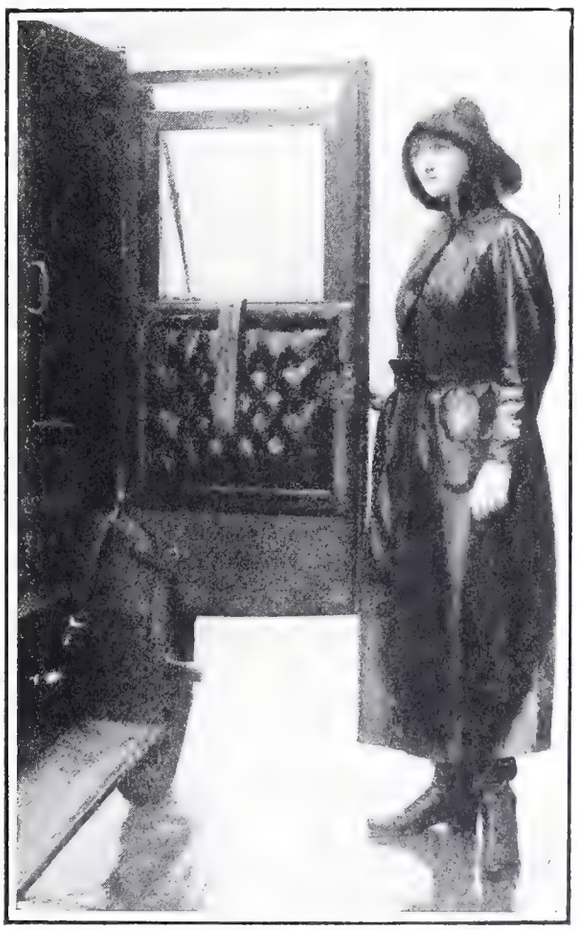
gathered together under the ægis of the National Union of Women's Suffrage Societies, of which Mrs. Henry Fawcett, LL.D., is president. When war broke out, Mrs. Fawcett appealed to all the societies within the Union to suspend their political activities and devote their resources, their industry, and their vast linked-up organizations to the relief of distress and the other urgent questions arising out of the war. An Active Service League was formed. "Let us show ourselves worthy of citizenship, whether our claim be recognized or not," was her call to her followers.

The central organization at headquarters took up the organization of relief. An enormous number of women had rushed to the offices when war was declared, asking to be allowed to help in some way—on Care Committees, in Red Cross work in connexion with the Soldiers' and Sailors' Families Association, the Belgian Refugees Committees, Schools for Mothers, Infant Welfare Associations, Girls' Clubs, etc. All these zealous women were indexed, and were drafted in batches or individually to organizations requiring assistants. But besides people offering their services, there also came to the central offices many women in distress, suffering from the effects of the first panic of the war which caused the chicken-hearted to dismiss their workers, whether of the wage-earning or the salaried classes. The officers of the National Union kept their heads; they referred people who could be best helped in that way to suitable organizations, and then for dressmakers in distress they opened the first emergency workrooms at their offices in Great Smith Street. At these workrooms the principle afterwards so strongly insisted upon by the Central Committee of training the workers and improving their skill was initiated. Four workrooms in all were started, including one in the East End and one in the Fulham Road.

They worked with the Women's Co-operative Guild in organizing maternity centres throughout London; they helped the National Union of Women Workers with patrol volunteers; and organized a scheme for a Professional Women's Patriotic Service Fund, for the relief of professional women whose needs had been inadequately dealt with. They gave from this fund remuneration to professional women who were out of work and offered their services to approved organizations needing workers for distress committees or other work of national importance.

The Women's Interests Committee was formed by them, and to their Scottish branch was due the great hospital scheme dealt with elsewhere.

On the eve of the arrival of the first refugees from Belgium, the London Society, 58 Victoria Street, S.W., agreed to undertake their official



LADY COMMISSIONAIRE
In Oxford Street, London.

ON THE RAILWAY.
Girls being instructed in booking-office work.
Centre: Ticket inspection.
Bottom picture: Booking-clerk.

registration and to provide French and Flemish-speaking interpreters. As the number of refugees increased, the responsibility of this work became very great: 187 interpreters were enrolled, 150 of whom were actually employed, whilst registration at the various London centres continued day after day from 8.30 a.m. to 12 at night. When the charge of the Belgian refugees was taken over by the Government, the system of registration which the Society had evolved was approved by them and adopted without alteration; the organizer in charge was transferred to a highly responsible position, first at Alexandra Palace (Government Hostel), and afterwards at the War Refugee Committee's headquarters in Aldwych.

What the other suffrage societies did was also noteworthy; they all helped in different ways. The Conservative and Unionist Women's Franchise Association offered their office and staff to the Soldiers' and Sailors' Families Association, and when the Government took over the payment of allowances they established a hostel for educated women thrown out of work, at Roland Gardens, Kensington; they raised funds for the new wooden huts war hospital at Netley, for the medical units being sent to the Serbian Army by the Scottish Federation of Women's Suffrage Societies; and

ON THE RAILWAY.
Examining tickets, and a woman porter (inset).

their branches in Ireland, Scotland and the provinces were equally active.

The Freedom League formed a Women's Suffrage National Aid Corps, inaugurated maternity centres, and convalescent hospitals for women and children dismissed from general hospitals for lack of beds.

Liberal women suffragists devoted themselves to infant and maternity welfare, to Belgian repatriation, and to the big problems of unemployment. The East London Federation of Suffragettes employed themselves in extensive relief work, crèches, cost-price dinners for expectant mothers, and to a big toy-making scheme, where some model toys were designed and earned much admiration at the exhibition of British Industries at the Agricultural Hall. The New Constitutional Society opened a workroom early in August for unemployed dressmakers, and also a club for soldiers' and sailors' families in Camberwell. The Women Writers joined the Emergency Corps, and in addition supplied warm garments to Indian and other troops. The Forward Cymric Suffrage Union raised money to help Welsh women and children in acute distress. The British (Overseas) Suffrage Union provided warm underclothing for poor children, and supported relief and milk depôts. The Church League made its activities felt by assisting on every committee on which its workers could serve.

Irish suffragists were also busy; directly after war began the Dublin suffragists established an emergency council, took workrooms, started a toy-making industry, and, further, organized a Tipperary club for women and a babies' crèche. The Irishwoman's Suffrage Federation organized the Dublin toy industry, where sixty girls were employed; Dublin coloured embroidery (formerly made in the Black Forest) was started, and also a domestic centre

for teaching washing, plain sewing and cookery; fifteen Belgian refugees were supported since December 1914; and a bed endowed in Dublin Red Cross Hospital. The Northern Committee organized a workroom where knitting was given out and over £100 paid in wages. Interpreter corps were formed to help with refugees, and working parties arranged.

Similar self-denying ordinances were issued by the National League for Opposing Woman Suffrage. At the commencement of the war the executive of the League decided that all propaganda work should be abandoned during

BILL-POSTING
At the Royal Oak, London.

the period of the war. Its members used their training in the interests of every society that needed help. The members of the staff at headquarters joined in the work of the Soldiers' and Sailors' Families Association. Branches of the League were notified at the outset of the decision arrived at, and were asked to put forth their energies in war-relief work of various descriptions. This request was heartily responded to by all the branches of the League, and in some cases anticipated. But in every instance the League and its branches merged themselves into some patriotic society; in no case did they endeavour to exploit the patriotism of the members of the League as an advertisement for the anti-suffrage policy. The names of well-known "Anti's" were to the front on every committee engaged in public service: its members were helping in every part of England, and in France and Flanders. Briefly catalogued, their activities during the war included local hospital service; national hospital service; provision of hospital equipment; convalescent homes; rest stations; Red Cross work for British, French, Serbian and Montenegrin troops; the Territorial Nursing Association; Soldiers' and Sailors' Families Association; Disabled Soldiers' and Sailors' Funds; clothing and comforts for sailors, British and Indian soldiers, for mine-sweepers, and for prisoners in Germany; recreation and reading-rooms for troops; Queen Mary's Needlework Guild; clubs for soldiers' and sailors' wives; women's unemployment; girls' clubs; Belgian relief work; Belgian refugee work; National Relief Fund; Serbian Relief Fund; Blue Cross Work; provision of hospitals for wounded; motor ambulances; help for officers' families; Armenian Red Cross work; provision of pillows for stretchers.

The National League for Opposing Woman Suffrage contributed many of its members for active service, Volunteer training corps, National Reserve, and Scouts' Committee for Defence work. One of its county branches was instrumental through its officers in carrying through an important scheme for the training and employment of girls for farm work; another branch similarly provided a free buffet for soldiers and sailors at one of the London railway termini. One of the officials of the League was decorated by the King of the Belgians for valuable hospital and relief work at Ostend and Rouen, and another worker of the League had the credit of having engineered the movement which resulted in 100,000 dollars being provided in Canada for a hospital ship.

Disinterestedness alike on the part of suffragist and anti-suffragist resulted in their trained energies being used to the utmost in the public weal.

On March 17, 1915, the Board of Trade issued an appeal to women to volunteer for war service. Previous to that appeal there had been a certain *dilletante* interest in the replacement of men by women that had been going on for some months. Many vacant situations in business offices and banks had already been

filled by women clerks; employment had begun to right itself for the industrial woman and the girl clerk, both of whom when war broke out were the first to suffer. The appeal seemed as if it was intended to reach a different class, and to gather in the woman who had had a good education and who might be employed on voluntary work or not at all. The official statement said:

The President of the Board of Trade wishes to call attention to the fact that in the present emergency, if the full fighting power of the nation is to be put forth on the field of battle, the full working power of the nation must be made available to carry on its essential trades at home. Already, in certain important occupations there are not enough men and women to do the work. This shortage will certainly spread to other occupations as more and more men join the fighting forces.

In order to meet both the present and the future needs of national industry during the war, the Government wish to obtain particulars of the women available, with or without previous training, for paid employment. Accordingly, they invite all women who are prepared, if needed, to take paid employment of any kind—industrial, agricultural, clerical, etc.,—to enter themselves upon the Register of Women for War Service which is being prepared by the Board of Trade Labour Exchanges.

Any woman living in a town where there is a Labour Exchange can register by going there in person. If she is not near a Labour Exchange she can get a form of registration from the local agency of the Unemployment Fund. Forms will also be sent out through a number of women's societies.

The object of registration is to find out what reserve force of women's labour, trained or untrained, can be made available if required. As from time to time actual openings for employment present themselves, notice will be given through the Labour Exchanges, with full details as to the nature of work, conditions, and pay, and, so far as special training is necessary, arrangements will, if possible, be made for the purpose.

Any woman who by working helps to release a man or to equip a man for fighting does national war service. Every woman should register who is able and willing to take employment.

It was stated on the form issued by the Board of Trade and circulated largely through the women's societies that women were wanted at once in farm work, dairy work, brush-making, leather stitching, clothing, machinery, and light machining for armament. It was stated also that to those with no experience training might be given and that "even if you can work only half of each day you may be useful."

By three o'clock the following day seven hundred registrations had been made at the various Labour Exchanges; these were mainly middle-class women and most of them asked for armament work. The next day's post brought the registrations up to 4,000, and in the first week over 20,000 registered. After that registration went on steadily at an average rate of 5,000 a week. The women automatically ranged themselves into three great classes for armament, clerical, and agricultural work;

OMNIBUS AND TRAM CONDUCTORS.

An omnibus conductor at Woking; On the tram at Newcastle, and in Edinburgh (bottom picture).

the next biggest demand being from those desiring shop assistants' work and dressmaking and tailoring. But though the women steadily registered the employers did not show any very great desire to employ them. When the register had reached 80,000 there had only been about 2,000 called out. There was, however, a reason for this.

When the Board of Trade drafted this scheme of war service it made the mistake of not calling in an additional staff to deal with what was evidently intended to be a huge national effort. Instead they endeavoured with the staff they had to cope with the new problem they had created. And this was the reason of the complaints which after a time began to be heard. The women were there, but they were not being called out. Those who registered in the first days felt that they had a grievance. Their willingness seemed wasted.

Instead of approaching the employers from the first and realizing the special features of their appeal, the Board remained for about three months as ordinary brokers of labour waiting to be approached by the employer. Canvassing of employers was only begun in earnest when questions were asked in the House of Commons, and after that a great improvement took place in the comparative figures.

But the reluctance of employers to replace men by women was more apparent than real. There was at the time that the figures on the War Register stood highest an enormous movement on what are known as the ordinary "live" registers of the Labour Exchanges throughout the country. The industrial women were given the first offer of all work that was within their powers and the War-Service Register was only tapped for vacancies they could not fill. The great complaint against women's labour had been that it was not mobile enough. The war changed this—not completely, but sufficiently to show that the single woman would after a time be easier to move from a locality where employment was slack to one where it was brisk. An example of such movement was seen when some of the fisher girls from the East Coast of Scotland, who had suffered considerably from the slump in fishing, were moved to the jute mills in Dundee. Everywhere women seemed to be replacing men; they were taken on in the "heavies" and Manchester goods departments in shops in London and the provinces; they were acting as commissionaires, whistling for "taxis" and opening carriage doors; one was replacing a coachman and driving a carriage and pair; many were taking the place of chauffeurs—though Scotland Yard had refused licences to women to ply for hire as taxi-drivers; they were ticket-collectors, ticket-sellers, carriage cleaners, and porters at railway stations;

TOWING A BARGE ALONG REGENT'S CANAL.

MAKING A DOLL'S HOUSE.
Copied from the Beguinage, Bruges.

in the railway manager's office they were mastering the language of "rolling-stock"; they were pushing milk-carts up Oxford Street; they were working lifts, driving motor-vans (and motor-omnibuses in the provinces), and trams; acting as packers, ordinary messengers, and cycle messengers; they were replacing highly important male gardeners at Kew; they were acting as park-keepers in the North and as recruiting officers; they were cleaning ships in the docks in Glasgow; they were tracing plans in engineers' offices in London; they were taking the place of footmen everywhere, of pantrymen, waiters, kitchen clerks, cinema-operators; there was even a woman potman doing cellar work in a London bar. Numbers of them were acting as clerks, typists, and messengers in the War Office.

Highly educated women were drafted into the Census of Production. The Assistant Censor was a woman, and many members of the Censor's staff likewise. In the boys' secondary schools women were everywhere replacing men, science being the subject in which recruiting was strongest; a games mistress was engaged in one boys' school, and "Smith minor" survived it. The replacement in the banks had been very great, but there was a firm stand in London, at least, against the woman counter-hand. No woman was allowed to cash cheques for the public or to handle the public money in the banks. It was said to be felt that this might involve later on the initiation of women into the secrets of banking and investment and lead them, perhaps, to thoughts of the Baltic or the Stock Exchange.

And while this enormous change was going on the War Register was being very slowly drawn upon. Employers naturally preferred women who had been employed before, and they felt they could get them from the ordinary registers of the Labour Exchanges or the ordinary scholastic or bureau agencies more readily than from the War Register. The existence of the War Register and the knowledge that there was this great reserve of women waiting to be drawn upon stimulated replacement. After the first nine or ten months of war there were very few industrial women, unless actual unemployables, idle, and it was difficult even to get young women to join trade schools of any kind, owing to the big demand for their labour outside. From the War Register, however, a certain number of women had been drawn for training in agriculture; one of the first experiments of this kind was made at the Harper Adam's College, Newport (Shropshire), to which women

had been drafted from Birmingham and Shrewsbury, most of whom had had a good education. The training included instruction in stock feeding and tending, dairying, poultry-keeping, horticulture, and general farm work. Other colleges which helped in the first scheme were Swanley, Garforth (Leeds), Sparsholt (Winchester), the Midland Agricultural Training College (Kingston-on-Soar), and Aberystwith. A three-weeks' course was given at most of these colleges, and included the rudiments of milking. For an industrial worker to take a course of this kind, even if free, would have meant giving up her chances of work at ammunition making or a similar war contract.

The greatest willingness to train came from the class above the industrial worker. As had been anticipated, there was a certain amount of artificial demand for women's work during the war which could not be described with any exactitude as a replacement, though it was, as in the leather trade, where men were lured from "clicking" to accoutrement making, an opportunity created by a temporary shortage of men's labour due to an abnormal demand. In the filling of shells and other work in connexion with ammunition there was eager competition for work from old and young. One old woman, who had tottered up to one of the munition works to plead for work, urged "the Germans killed my son" as a reason for her desire for such a grim occupation.

When the replacement of men by women hardened there was considerable anxiety felt both by women and men lest any lowering of the standard of wages would result. The anxiety was not unfounded, for cases were known where some trifling alteration in the work done was made by the employer, who thereupon said it was not the same, and paid only a half the sum formerly paid to the male worker. It was felt that if this was permitted many employers would get so used to cheap female labour that in the inevitable reaction and slump after the war they would be reluctant to replace the cheap woman by the retired soldier expecting his former wage. Mrs. Fawcett approached the President of the Board on behalf of the newly formed Women's Interests Committee of the National Union of Women's Suffrage Societies to call a conference of women's societies to consider the scope of possible war-service and also on the question of wages. When the conference met Mr. Runciman stated that:

> As regards the wages and conditions on which women should be employed, as a general principle the Exchanges did not, and could not, take direct responsibility as to the wages and conditions, beyond giving in each case such information as was in their possession. In regard, however, to Government contractors, it had been laid down that the piece rates for women should be the same as for men, and further special instructions had been given to the Exchanges to inform inexperienced applicants of the current wages in each case, so that they should be fully apprised as to the wage which it was reasonable for them to ask. A general safeguard against permanent lowering of wages by the admission of women to take the place of men on service would be made by asking employers, so far as possible, to keep the men's places open for them on their return.

It was, of course, evident to many of the women who obtained employment either through the War Register or the ordinary register that there was every chance of their entry being a permanent one; in many cases the men would never return; in others they would return either unfit for their former work or with no desire for it. This was especially the case with men who had led a sedentary life, and experienced the great pleasure of open-air life in camp. While honourably intending to keep their bond, and, if called upon, give up their jobs to the original owners on their return, there was a strong feeling amongst war-service women of all classes that in the interests of both the best terms should be made with the employers. The millennium—a very sad one it had proved—had come in the matter of opening up new opportunities; a few months of war had done what years of agitation had failed to do. Nothing would ever be the same again. Women realized fully and soberly their new responsibilities and the share which the younger women would have to shoulder in the aftermath of the war when they lived in the after years of paying for it.

Of women's ingenuity in thinking of ways of helping there was no end. The Government on several occasions appropriated some of their schemes and ideas, and the fact only flattered them. This was very noticeable in the dealings with the Belgians; men did not appreciate the right method of dealing with the family unit when it came clamouring in strange tongues in its thousands; it does not occur to the average Englishman that everyone does not know English. And so the interpreting for welcoming, feeding, clothing, and housing of thousands of Belgians owed its organization in the main to women.

(Other aspects of Women's Work are dealt with in a subsequent chapter.)

CHAPTER LXXII.

THE FEEDING OF THE ARMY AND NAVY.

Food and Military Efficiency—Reorganized Army Service—Wellington as Commissariat Officer—The Lessons of History—Army Provisioning in Franco-German War—The Ration of the British Soldier—Waste and Its Causes—New System of Contracting—Feeding of the Home Army—Provisioning of Expeditionary Force—Supplying an Army in Retreat—Changing the Bases—The Daily Routine—Links of Transport—Important Work of Motor Lorries—Organization of British Manufacturing Trade—Some Personal Narratives—Comforts for the Trenches—Feeding the Indian Contingent—Army Service in the Gallipoli Peninsula—Indian Mule Pack Transport—Victualling the Navy—Clothing and Food Supplies—Work of the Victualling Yards—Provisioning of Fleet Auxiliaries—In the Days of Howard and Drake—Popularity of New System.

THE sudden outbreak of the European War found the Army Service Corps, upon whom rested the burden of provisioning the Army, both at home and over seas, in the spheres of supply and transport, ready with plans which put its organization on a war footing with a minimum of delay. That the Army Service Corps rendered loyal, devoted, and efficient service from the very outset of the war, and that the system established stood the crucial test imposed upon it by the creation of vast new armies, was acknowledged by all ranks. The Cinderella of military departments, whose important functions had in the past been too often regarded as consisting of simple administration and routine, came into its kingdom at last.

It was generally admitted that the qualities which distinguished the British soldier—his tenacity, ability to endure privations, his unfailing cheerfulness under all conditions, his immunity from ordinary sickness as compared with earlier campaigns—were to be largely attributed to the fact that he was the best-fed soldier in the field. The French Commissariat copied his ration, the German soldier envied it, the British soldier himself throve on it, realizing that those responsible for his creature comforts had resolved that, even if there was waste, at least there should be no stint of food. The wonder of it all was increased by the fact that the diet of fresh meat, of newly baked bread, of jam, of bacon, cheese, and milk, and other commodities which made up a field ration which has never been equalled, so rarely failed to reach even those in the fighting line. There were occasions during the anxious days of the retreat from Mons when units could not be reached, but these were few indeed. Neither privations, nor difficulties, nor dangers daunted the Army Service Corps in the discharge of a duty in which their own casualties were not few.

What effect the regular service of rations had in enabling the "contemptible British Army" to withstand the strain of those early anxious weeks when the Germans were marching by rapid stages on Paris it was never difficult to understand. Regular rations were a powerful ally during those dark days, keeping men in the fighting line who might have been in field hospitals, assisting to maintain discipline at times when nothing but the sense of it could have prevented rearguards who were fighting

LORD KITCHENER VISITS A CAMP.
Inspecting the soldiers' food.

actions to gain time from being overwhelmed. It was abundance of good food added to medical comforts which kept the British soldier through the weary winter months of 1914-15 in the cold and flooded trenches, and if a choice had to be made as to which factor was the more important during that phase of the war, the supply of food would rank first.

The comparative neglect of this subject by military historians had often been the subject of comment, but was not difficult to understand. Here were no high lights of glamour and romance, no pomp and circumstance, no echo of international politics, no nice problems of strategy or tactics. The historian had more stirring topics for his pages—the crash of battles, the storming of fortresses, the sack of towns, the dash of cavalry charges, the thunder of the guns, the deadly work of infantry with the bayonet, the reckless daring of forlorn hopes, the doubts and fears of night attack. What had rations of bread and meat in common with these glowing themes? Was it to be wondered that for long years army service tailed along at the rear of the Army, something above the status of a camp follower, something less than a military organization? That a system which until recent years had been largely civilian in character, and which had sprung out of no higher incentive than official indifference, if not discouragement, proved itself ready to meet the emergency of a great crisis was one of the most satisfactory features of British administration.

The Army Service Corps as it existed at the outbreak of war was comparatively new. It was reorganized only in the year 1888, and it should never be forgotten how much was due to the work and influence of Sir Redvers Buller. That staunch friend of Tommy Atkins had made a careful study of all army problems and not least of those furnished by the work of supply and transport. He knew it all, and it was his influence which was largely responsible for elevating the status of the Army Service Corps and making it the admirable instrument it proved itself to be. Many developments took place in the years immediately preceding the war, the most important being the reorganization of transport due to the introduction of the mechanically propelled vehicle.

Glancing backwards, the immediate predecessor of the Army Service Corps, founded by taking men from other parts of the Service and training them for the special work, was the Commissariat and Transport Staff. This came into existence as a united body only in the year 1875, as, although the departments of transport and supply were formed under one head in the year 1870, its status was little more than that of a civilian body, even the transport officer having no combatant rank. A commissariat organization had formerly been

created afresh for every war, and as promptly disbanded when the war was over. The historian of supply and transport could easily fill a volume with the tale of the discreditable achievements of crude systems of hastily assembled wagon trains, and the exploits of unscrupulous contractors whose main desire was to see how nearly they could succeed in starving the Armies which England at different times dispatched overseas. Other reasons for the failure of these early commissariat arrangements were the divorce of transport from supply, the quarrels as to whether the organization should have a military or semi-military standing, whether the control should be with the politician or the soldier, and if the financial arrangements should be in the hands of the Treasury or the War Office. The history of British commissariat services up to the time of the European war confirmed the point made by the well-known military writer, the Hon. John Fortescue, that "deep in his heart the British politician cherishes the conviction that in dealing with money a soldier is either a rogue or a fool."

There were, of course, exceptions to the chaos and scandals which fill the main chapters of the story. The case of the Peninsular campaign was one. The significant relation of army commissariat to the waging of successful war was well recognized by Wellington, who crystallized its importance in a phrase wrung from him during the bitter experience of the provisioning of his army in the Peninsular war: "Many can lead troops; I can feed them."

It is well known that Sir Arthur Wellesley, as he then was, was a first-rate commissariat officer, and both he and his Commissary, General Kennedy, gave the closest attention to food and transport problems, and raised the corps employed in the work to a high degree of efficiency. This organization, however, having served its purpose, was allowed to be disbanded after the war, and nothing remained of it but a record in an official pigeon hole, so that in the next campaign it was necessary to start *de novo*. Experience of army service under various conditions and in different countries was gained, but this was generally all that the British Army had to draw upon when next the nation was at war.

No soldier worthy of the name has ever denied, however, that all strategical move-

WEIGHING IN.

ments of armies must depend in the last resort on the means of obtaining food. All great commanders, whether of the ancient or the modern world, knew it for a basic truth even while they attempted to evade the issue. Darius, who in the pre-Christian era dispatched an army of 700,000 men across the Bosphorus, allowed them to go starving to court defeat. Xerxes was a wiser general; he knew that the great army, said to number two and a quarter millions of men, which he sent into Greece, and which took seven days and nights to cross the bridge of boats built by Egyptian and Phœnecian engineers across the Hellespont, must depend for victory upon the ability to feed it. The provisioning of this force, the largest army of ancient times, accomplished by the accumulation of enormous reserves, was a stupendous task, the difficulty of which was accentuated owing to the fact, recorded by Herodotus, that with camp followers the number would be swelled to about six millions of people.

All the teachings of history have made it plain that the successful commander of armies must also be a commissariat expert. The experience of the Thirty Years War impressed the lesson on Gustavus Adolphus; Frederick the Great sacrificed the mobility of his armies rather than allow hunger to thin their ranks; Napoleon learnt the bitter truth that hunger is a foe more to be feared than steel during the retreat with a starving army from Moscow; the need for food imposed severe restrictions on the operations of Wellington in the Peninsula.

Misled by Spanish assurances as to the supply of provisions, Sir Arthur Wellesley crossed the frontier from Portugal into Spain lacking any adequate means of transport and without magazines. The failure of Spanish contractors, and the open hostility of the people of the country to their English allies, brought the British army to the verge of starvation. Half a pound of wheat in the grain daily, and twice a week a few ounces of flour with a quarter of a pound of goat's flesh formed the sole subsistence of officers and men. This meagre fare was indeed only obtained with difficulty, and its distribution was often attended by unseemly behaviour. It was found necessary in the end for the British army to retire into Portugal, where the command of the sea made it possible to feed the army from home sources of supply, and to furnish as well the means of subsistence for the population of the territory in which war was being waged.

Wellington was but following old practice in moving his army nearer the coast. Historians have indicated that wherever possible invading armies marched parallel with the sea in order to have the support of their fleets for food transport.

The Turkish army was probably the first to estimate the allowance of the soldier's daily ration, and to Napoleon should perhaps be

A HURRIED DINNER.

MAILS FOR THE FRONT.

Repair Department at the General Post Office: making parcels secure, which have been carelessly packed, before dispatching to the Front.

assigned the credit of first establishing magazines on a large scale for the provisioning of an army of invasion. Old records have suggested the existence of such systems in a crude form in much earlier days. Certainly Xerxes accumulated immense stores of provisions along the line of march of his great army, and it was the custom of the Athenian armies not only to march near the sea whenever possible in order to have the support of their fleet, but they left behind in Athens a body whose duty it was to attend to the provisioning of the troops.

The system of definite rations was also adopted in the old days, certainly by the Roman army among others. The legions carried their own food, and one day's rations appears to have consisted of about two pounds of wheat, rye, or barley, some pork, and lentils and other vegetables. A supply of wine was always provided for the Roman soldier.

Coming down to the Middle Ages, when comparatively small armies were the rule, Henry V. invaded France with 6,000 men of arms and 24,000 bowmen, and the troops lived to a great extent on the country they invaded. Unless, however, it was possible for the army to make a rapid advance the attempt to live on the country invaded was apt to fail. The only recorded instance of success was the insurgent army of General Gomez in Cuba, numbering 35,000 men, which in the year 1898 lived for months entirely on the produce of the fertile soil of Cuba. In this case the army had been recruited from the ranks of agriculturists, and on laying down their arms the troops returned to their occupation on the land, literally turning their swords into plough-shares. The systematic quartering of the troops on the inhabitants of a country was initiated by German troops some time in the fourteenth century, but the arrangement was coupled with an order to the soldiers to pay for what they obtained. More ruthless methods of obtaining food from an invaded territory were practised by the German army during the European war.

No account of army commissariat would be complete which failed to do justice to the work of Louvois, the War Minister of Louis XIV.

Louvois doubtless learnt much from Gustavus Adolphus, but he improved upon the methods of his teacher. The general system of magazines of provisions which he created was well conceived, and was said to have greatly increased the strategical power of the French armies. For the campaign in Holland, in 1672, Furse records that he provided the French army with both a siege and a transport train, then an innovation in the art of war.

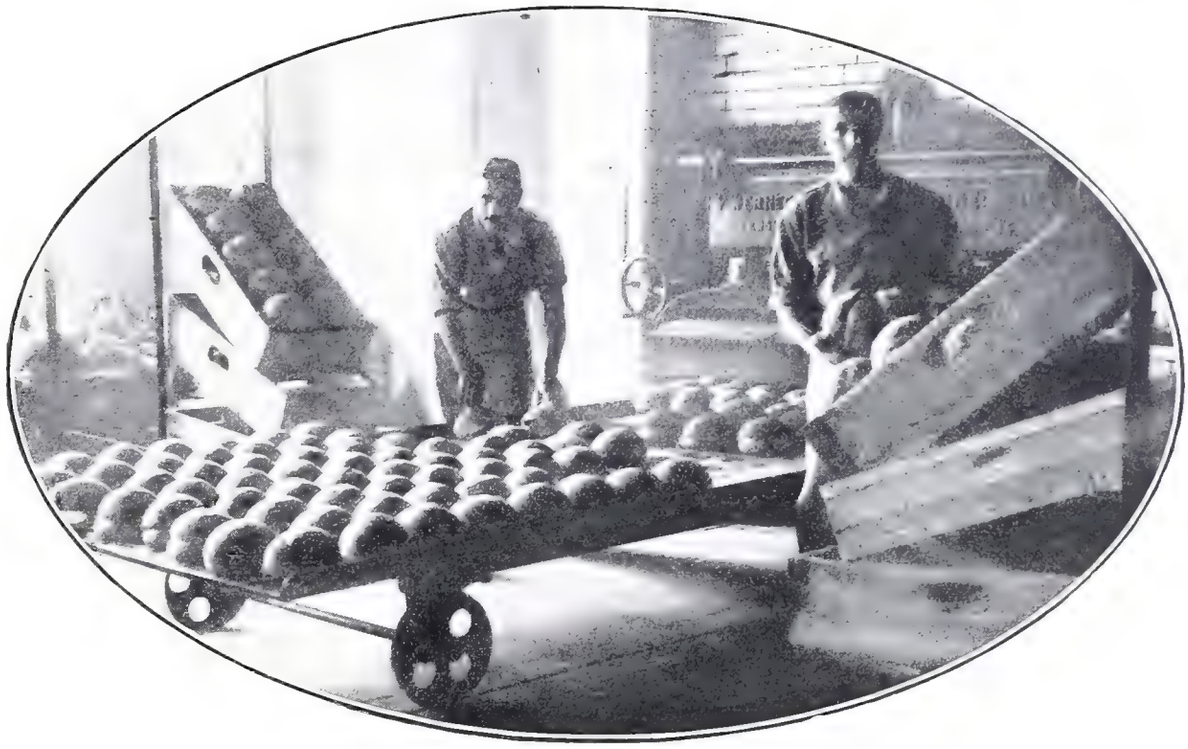
Frederick the Great was a first-class commissariat officer. He recognized that it was not enough to collect provisions in magazines, but that the plan of campaign must be so drawn up as to enable the supplies to be within reach of the troops in the field. Undoubtedly the magazine system militated against rapidity of movement, and on more than one occasion Frederick was known to have made the movement of his troops subservient on those of the provision columns. At that time the Prussian soldier received daily 2 lb. of bread, and weekly 2 lb. of meat; the rest he bought out of his pay. In many respects Frederick differed from Napoleon, as the latter sometimes paid little or no heed to the feeding of his army. Frederick, however, waged war in a different manner to Napoleon; it fitted in with his method to keep near the base and to have huge trains of wagons accompanying the troops. This rendered the movement of his army slow, but inasmuch as the operations undertaken consisted mainly of sieges of the enemy's fortresses, the course of the campaign was but little affected by waiting for food supplies. The capture of a convoy was often deemed of more importance than the defeat of the enemy in the field. Under the conditions which prevailed there was something to be said for the practice often followed by Napoleon of living on the country traversed. In some campaigns, however, notably in Egypt, Napoleon showed great care for the subsistence of his troops; whereas in the Peninsula, Junot had explicit orders from the Emperor not to delay his march a single day waiting for provisions. "Twenty thousand men," wrote Napoleon, "can live anywhere, even in the desert."

It was in this spirit that the ill-fated march on Lisbon was undertaken in accordance with the orders of the Emperor, and although they plundered everything as they went along, the army of young recruits, which originally numbered 25,000, was reduced to 2,000 starving men by the time Lisbon was reached.

General Foy, commenting on this adventure, wrote:

"The French were not expected in Portugal

SERVING OUT RATIONS TO LONDON TERRITORIALS.



INSIDE THE BAKEHOUSE.

either as friends or enemies, and no preparations had been made to receive them. Yet, all at once behold them entering Portugal with no provisions, no means of transport, and pushing on without stop through a country in which a prudent traveller never quits the place where he has slept without providing subsistence for the day."

What Wellington did in this campaign has been referred to above. He fell back on the sea, "the nurse of British armies," drawing his supplies from the water while devastating the country so that nothing should be left for the invader. It was Massena who was in command of this the third army of invasion, for Portugal, and the starvation of the French army was the most effective method of forcing the enemy to abandon the march on Lisbon.

There are two or three other campaigns the events of which had an important bearing on the intimate connection between success or failure in field operations and the supply and transport of food. The first of these was the Russian campaign of Napoleon in 1812. The Emperor well knew that success in the invasion of Russia with a force of 400,000 men could only be achieved by placing the provision and transport of food for his army under sound administration. At the very outset of the campaign he laid down demands for 20 million rations of bread and rice, which he estimated would furnish a fifty days' supply, and 2 millions of measures of oats as provision for 50,000 horses for a similar period. He also established large magazines at Thorn, Königsberg, and Danzig, and created a wagon train for the necessary transport. In no previous campaign had anything like such complete arrangements for transport been made. In addition to the base magazines, there were established six lines of food depôts on the rôad to Moscow. The failure of this ambitious enterprise was largely due to the breakdown of a scheme for storing and transporting food which, however admirable on paper, could not be realized in practice. The distances between the lines of depots made them almost useless, and the army had to cater for itself on the march. The truth was that in his efforts to engage the enemy in a decisive battle Napoleon refused to wait for the food trains, relying upon feeding his army on the Russian magazines after the enemy had been defeated. The Russians, however, destroyed everything in their retreat, and even the vast accumulation of provisions at Danzig and Königsberg, which Napoleon intended to transport to the field by means of the waterways could not be got within reach of the army, on which disease as well as starvation had commenced to take toll. Clausewitz correctly attributed the melting away of Napoleon's army in his advance and its utter ruin in retreat to the Emperor's want of regard to the subsistence of his troops. It was

INDIAN TROOPS IN CAMP.

Baking bread; milking a goat; and preparing a native dish.

a rabble and not an army that Napoleon commanded at the close of this disastrous campaign. It was an instance of a great military enterprise wrecked for want of adequate provisioning arrangements.

A British scandal in army commissariat was furnished by the Crimean War. There was such an entire absence of system that within a very short period every branch of army administration utterly failed of its object. In the ordinary meaning of the word there was no "transport," and although food brought from overseas was waiting within a comparatively few miles of the point at which the military operations were being conducted, there were no means of bringing the rations to the men. Sir Charles Dilke, in an article in the *United Service Magazine* used strong but justifiable language on the conduct of this campaign. He wrote :—

> In the Crimea there were no great marches, no skilful manœuvres in the open field at long distances from the base; our most advanced posts were never a full day's march from the sea, and it would have seemed to be a simple task to provide for the army in the field. Yet the whole of our plan utterly broke down; the horses of the cavalry and artillery were destroyed by doing common transport work, for which they should never have been used, and the army of the richest nation in the world commanding the seas starved almost within sight of its own ships for want of proper arrangements as to food, rotted for lack of sanitary provision, and, from the absence of that care which is the business of the general staff, became a wreck of itself.

Things were very differently managed in the case of the small army which quelled the Indian Mutiny. It was a remarkable tribute to the efficiency of the Indian commissariat of that day that, in a country which for the time being was largely hostile, Lord Roberts should have been able to write :—

> Throughout the campaign the Commissariat Department never failed; the troops were invariably well supplied, and even during the longest marches fresh bread was issued almost daily.

The Civil War in America, both in respect of numbers of men engaged—the Union army increased to over 1,300,000 men—and the duration of the campaign, furnished many lessons to commissariat officers. From some points of view, the position in America in 1861 was comparable to that in Great Britain at the time of the outbreak of the European war in 1914. Large armies had to be raised, and there was, as in the case of the British commissariat, no experience of provisioning in the field a force of the magnitude which had to be formed, ultimately by compulsion. It was not in that war a case of having to provision an army overseas and requiring the assistance of a strong navy, but those responsible for supply and transport realised that the possession of the navigable rivers would give an overwhelming advantage to the side which could hold them and convert them into lines of communication. The blockade of the southern coasts which was afterwards undertaken, with the object of preventing supplies reaching the Southern army, was an illustration of the strangling process which sea control, as in the European

war, gave to the nations which possessed it. Hunger was the bitterest enemy of the Confederate army in a war which, like the European campaign, threatened from its outset to be one of attrition.

In the Franco-German war of 1870–71, the arrangements for provisioning the German army were the best which had up to that time been devised. The whole of the country contributed towards the feeding of the troops. Three armies had to be fed, comprising over 400 battalions, 350 squadrons, and 250 batteries. These were large numbers to provision at a period when the scientific organization of commissariat was in its infancy. As compared with the great European war of 1914 the numbers to be fed were, however, insignificant. The plans adopted in 1870 were far reaching, and included not only the establishment of food reserve magazines, but the provision of field bakeries and other accessories for the supply of the troops. In addition to the corps which had been locally organized being partly supplied from their own districts and requisitions being made on the invaded territory, large food purchases were also made abroad, these being delivered at Cologne and handled by the general transport system. It was found that the invaded territory could only be made to yield one-third of the provisions and forage required for the army, so that two-thirds had to be provided by the commissariat. The claim was justly made that no army had been so well fed up to that time, and yet there were short periods during the operations when the troops suffered the severest privations from want of food. These arose from various causes; supplies sometimes failed, and to these deficiencies were often added difficulties of transport due partly to the congestion of the railways and partly to the shortage of animals for road haulage.

The nature of the task which was entrusted to the German commissariat may be appreciated from the figures of the daily requirements of the forces which invested Paris, quoted by Col. G. A. Furse, in his well-known work on the provisioning of armies. These forces required each day 450,000 lb. of bread, 102,000 lb. of rice, 539 oxen or 102,000 lb. of bacon, 14,000 lb. of salt, 900,000 lb. of oats, 2,400,000 lb. of hay, 28,000 quarts of spirits, a large supply of coffee and sugar, and many thousands of cigars. The provisions and forage for each army corps filled each day five railway trains of 32 wagons. That, in spite of the care with which all the arrangements for the feeding of the army were made, sections of it were so often near starvation illustrated the difficulties of properly feeding an army on the march.

A LARGE FAMILY TO FEED.
Men of the Army Service Corps at Dinner.

TRANSFERRING MEAT FROM A STORE TO A RAILWAY.

PLACING A JOINT INSIDE A BEEHIVE OVEN.

The same thing happened to the army which in the autumn of 1914 made its rapid march on Paris, leaving its provision trains hopelessly out-distanced. It was probably one of the severest blows to German military pride to learn, as their leaders did learn, that in the art of provisioning an army they could teach nothing to the British, and that the completeness and efficiency of the German commissariat system was far excelled by that which helped the little British Army to delay and finally, in common with its Allies, to thwart the threatened seizure of Paris, and which kept our men at the highest pitch of efficiency when they were barring the way to Calais. It was said that the British commissariat had much experience to draw upon, that something had been learned from the campaigns in Abyssinia, Ashanti, and Egypt, if only what to avoid, and that important lessons must have been derived from the provisioning of the British Army over long lines of communication during the South African War. It was suggested that the British had tested all the various methods of provisioning which were applicable to field service. There was doubtless something in this contention. This, however, was certain, that while in the early months at least there was a lack of men, and for a very long period a shortage of munitions, food was always good and plentiful. It was generally admitted that the system evolved for the armies operating on the Continent successfully withstood the strain of the Great War.

How was this system worked out so that the outbreak of hostilities called into existence arrangements to meet the needs of the case? The method of provisioning adopted on the Continent of Europe, although very similar from the point of view of the ration to the South African War, was absolutely different from the transport standpoint. The change was largely due, of course, to the coming of mechanical transport, but not wholly. The British soldier, in spite of contractors' scandals and a discreditable wastage of both money and supplies, was well fed in South Africa. The ration then was $1\frac{1}{4}$ lb. of biscuits, 1 lb. of fresh meat or 1 lb. of tinned meat, 4 oz. of jam, 3 oz. of sugar, 2 oz. of desiccated vegetables, $\frac{1}{3}$ of an oz. of tea, $\frac{1}{2}$ oz. of coffee, and pepper and salt. In the European War this ration was reinforced by 4 oz. of bacon, and very excellent bacon it was, and 3 oz. of cheese, and another change was the supply of $1\frac{1}{4}$ lb. of fresh meat, some extra tea, which was much appreciated, and the issue as a substitute for the extra meat of $\frac{1}{8}$ of a tin of condensed milk. Jam was always a favourite item of the soldier's ration. It was first issued free as a ration in Egypt in 1889, and was adopted as a field ration to the Ashanti campaign of 1895–96.

It was said that the British soldier in the European War was far too well fed and that there was waste. Of course there was waste; unless an army were to be doomed beforehand to privations which would materially affect its fighting value, there must be waste. It was Moltke who laid down the dictum that "No food was too expensive," and it is recorded that in the Philippines the waste and losses of American detachments fed and equipped many

of the insurrectionists in a way they deemed to be luxurious. There were other causes, as there always are in war, which might appear to furnish foundation for the charge of wasteful provisioning. Although a small fraction of the supplies were obtained by purchase in France the bulk of the food for the army had to be sent from England, and it took several days to reach the firing line. A battalion to which full supplies had been consigned on Monday from the English depôt which fed the Expeditionary Force might conceivably have had its strength reduced by anything from 20 to 50 per cent. by the time these supplies reached the Front. Indeed, in some of the bloody battles which took place in the fight for the coast, a larger percentage of the men than that named above was put out of action while their food supplies were in transit. Uninformed critics suggested that such supplies could be diverted, but the nature of the task arising from the congestion of the railways and roads, and the disposition of the army rendered such a remedy for waste an impossible one. Similarly, in the case of the large home armies under training it was usually necessary to send full supplies. The number of rations could not be reduced on the chance of men having been granted leave which might be cancelled by a "stand fast" order at the last moment. Attempts were made by reducing the ration

PREPARING FOOD FOR THE HORSES.
Unloading fodder; chaff-cutting machine (top picture); and a portable field-trough.

and substituting a money allowance to economise food, but much depended upon regimental management, which was a varying quantity.

While on the subject of waste, the vexed question of cooking may also receive attention. There was indifferent cooking, particularly at the outset. Under peace conditions the number of army cooks was limited, and when the time came to expand the Army

Service Corps to many times its original strength, while there was no difficulty in recruiting for this branch, it was not easy to obtain efficient cooks. To the credit of the men who had to endure indifferent cooking they understood the cause and made light of a grievance not at any time universal, and which gradually ceased as the cooks settled down to their duties. All complaints, at least from the army overseas, finally simmered down to those relating to a plethora of plum and apple jam, and the British soldier, with his usual sense of humour, when surfeited with this luxury was wont to "hang out banners on the outward walls" of his trenches, these crudely conceived emblems being embellished with forcibly worded protests against a further supply of this particular delicacy.

EARLY MORNING.
Serving out hot coffee.

The good service given was in no small measure due to the spade work which had been done before the war by the Army Service Corps. In spite of the fact that practically no money was available, the system which should obtain in the event of a European War had been fixed. The sites of depôts for the feeding of the home armies and the Expeditionary Force had been inspected. Some were situated on the coast, and others, to the number of thirteen in all, at convenient centres inland. When war was declared the organization was ready; possession was at once taken of the premises which were to serve as magazines, and the accumulation of the necessary reserves was commenced. For a short period of ten days only were the old commissariat arrangements allowed to remain in force. Under that system each unit provided its own food by direct buying, and had this method continued to prevail the rule would have been for each command to purchase its own food. Generals in command of particular districts would have been competing against those in command of adjoining areas for the supply of the home forces. On the top of that the War Office would have been buying for the Expeditionary Force and the Admiralty purchasing victualling for the Navy. Under the scheme ready to be put in force with a minimum of delay all buying passed into the hands of the War Office and competition was eliminated. Contracts were made directly by the War Office, and all food, forage and other stores subjected to rigorous analysis and inspection. No possible loophole was left for the supply of indifferent or bad food as in the case of the South African War, when contractors dumped their lots on board ship with little or no supervision.

The 1914 system expanded with the growth of the armies, and the huge stocks accumulated always assured supply being well ahead of demand. Each of the magazines had a definite area to supply, and a special depôt was established for the supply of the army overseas. The provisioning of the home armies, in spite of the constant movement of the forces in training, was easily arranged. The magazine serving the South of England, or the Eastern Counties, or the West, knew day by day the number of rations which had to be provided. With the railways under military control and a constantly augmented motor transport fleet, a sudden addition to the number of troops being fed from a particular magazine was easily met.

It was an interesting experience to watch the work of a depôt which might have to provide the daily food for a quarter of a million men or more. One of these depôts was indeed enlarged to a capacity which would enable it to hold supplies for an army of 1,000,000 for one month. The work of such a depôt in giving effect to the policy of the Director of Supply and Transport, of demanding, collecting, inspecting, maintaining, and dispatching supplies either to foreign or home stations of the Army was no light task. Such a depôt for the purposes of the war was divided into four departments—the home, foreign, stores, and interior sections. A day spent at one of these depôts was a revelation in the advance made in the organization of Army Service. The buying arrangements, the marshalling of the inwards road

AN INCIDENT AT THE FRONT.

Officers and men taking supplies to the firing line.

FEEDING THE FIRING LINE: RATIONS FOR BRITISH INFANTRY.

Distributing "bully beef" from motor-lorries during a severe engagement.

transport in a delivery yard, the lay-out of the railways for inwards and outwards traffic, the finely conceived storage accommodation, the system of inspection and analysis by competent officers, the arrangements for daily loading for dispatch to camps and towns served by the depôt, gave evidence of scientific management. In the home section were to be found the stores of meat, flour, tea, sugar, biscuits, and the other commodities. For the feeding of the home army, to the provisioning of which the majority of the depôts were devoted, separate receptacles alongside rail were set apart for the requirements of the different camps and towns in the area supplied. These were filled over-night with the following day's supplies and usually loaded on train in the early morning. Flour only and not bread was sent out from the bases of the home army, the bread being supplied by bakeries in the various districts where the army was quartered. The flour was delivered to them and made into bread at a small fixed profit. The daily routine was carried through without hitch, and although the army of workers was recruited from the ordinary ranks of labour—including a considerable female element for the light packing work—and was not amenable to military discipline, there were no labour troubles which ever became acute.

The depôt to which reference is made directly served the Expeditionary Force, but it maintained reserves for the Army in France, including millions of pounds of preserved meat, biscuits, and medical comforts. The heavier packing and loading was done by the men, but in a special section the large number of girls employed packed the iron rations which took the place of the old emergency ration, and other articles of food which needed special care. Tea and sugar were weighed in grease-proof bags, put in a tin with two cubes of Oxo, lightly soldered, because it was found that the tins were apt to come open when carried, and packed in boxes which held 100 rations each. In addition to the service rations, a reminder would be given to the visitor to the depôt of the voluntary gifts of food and little luxuries which came the way of the soldier. In one large room could be seen a corps of girls packing some of the Royal Gift boxes, and in other instances the female hands were engaged in packing the seed dainties for the Indian soldier, who all through the war, with the exception of certain commodities sent from India and local purchases, had his rations sent from England.

COOKING ON THE FIELD.

Reference was made above to the ease with which the Army Service Corps was recruited. There were many evidences of this; to take only one, the various professions represented among the officers at one of the great food depôts showed how freely commerce, sport, finance, and science had given up their sons to this special work. Side by side with professional soldiers, veterans of the Army Service Corps, were to be found in uniform buyers from commercial houses, expert chemists and analysts, a director of a famous financial trading corporation, a dealer in produce, an engineer, a well-known County Cricket captain, not without commercial

[Barnett

MAJOR-GEN. S. S. LONG, C.B.
Director of Supply and Transport.

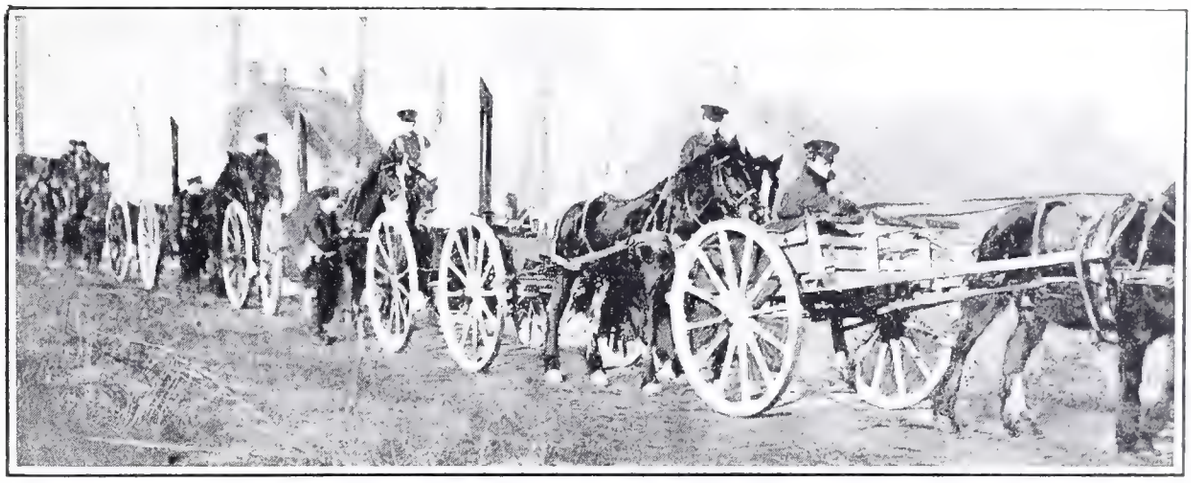
experience, a son of a famous actor. a member of the peerage, an expert in transport. All these had come forward to do their share in shouldering the burden of the Empire. Ordinarily, of course, all the buying was done by the War Office, but to the officer in charge of the depôts was reserved the right to make emergency purchases, and the right was freely exercised at times. The bulk of the depôts were, of course, established for the provisioning of the forces maintained at home, and the work was of the same character at all.

Interesting, however, as were the methods by which the growing army in England, gradually increased in number to millions, was fed, it was a far more difficult task to ensure regular supplies of rations to the ever-increasing number of men in the field, particularly when to the army operating in France was added the forces landed on the Gallipoli Peninsula. These constituted by far the largest armies ever maintained by the Empire in any field of war. When in August, 1914, it was decided to dispatch an expeditionary force to the Continent to cooperate with the French and Belgian armies, the first step taken was to ensure that this army should be properly provisioned. Home bases were at once established to undertake the work of furnishing not merely food to the men, but forage for the horses, and a supply of petrol for the mechanically propelled lorries, which were for the first time assigned an important rôle in army transport. It should not be forgotten that the work so admirably carried out by Major-General S. S. Long and by Col. A. R. Crofton Atkins, his deputy at the War Office, and by the many other officers associated with the provisioning of the Army, as the title of the department indicated, included both supply and transport.

Several bases were concerned with the supply to the armies overseas, for while there were two main food depôts, a railway home base from which nearly all food stores and also cigarettes, tobacco, and candles were dispatched, fresh meat was handled at a special port depôt, also hay, while to another port was allocated the work of consigning to the front the huge supplies of petrol. With the increase in the number of men on active service it was necessary to accumulate large reserves, not only at the special home bases from which the soldiers in the field were fed, but to maintain in the reserve depôt surplus stores which could be drawn upon when required. In addition to the home bases, overseas bases were placed at the disposal of the British Military authorities by the French Government, who from first to last gave full facilities for the work.

The first overseas bases were established at certain French Channel ports, and the initial work was to pour into those bases reserves which, in the event of any stoppage of the steady stream of supplies from the home base, should tide over a short emergency. Supplies of field ovens and travelling kitchens and other cooking appliances of all sorts had to be accumulated in advance. The

COL. A. R. CROFTON ATKINS, C.M.G.
Deputy Director of Supply and Transport.



A TRAVELLING KITCHEN AT THE FRONT.

railway transport on the British side was easily arranged, as the railways were already under Government control, and plans of working which had been drawn up before there was any threat of war were readily put to the test of active service conditions. Sea transport to the overseas base was a matter of easy arrangement, and from the first day of war, although the work increased to a point which meant the daily loading and unloading from depôt to rail, from rail to ship, from ship to overseas base, and the reloading on rail, and the subsequent handling by road transport of many thousands of tons of dead weight, the organization worked with the utmost smoothness.

The work at the overseas bases was an interesting sight, and was described in different issues of *The Times*.

The key-notes of the system of handling the vast amount of material coming under the head of supplies were simplicity and the saving of labour. After being brought from overseas the cargoes were landed and stored in the large sheds, or hangars, lining the docks and quays. For convenience in storing and accounting the sheds were divided into sections, and as a ship came in it took up a berth opposite the sections which it was desired at the moment to fill. From the stuff thus accumulated one day's supplies for the troops dependent on the base in question were each day collected in bays or pens arranged close to the railway lines laid alongside the sheds, each bay being large enough to contain the quantity consumed by a formation such as an Army Corps, a Cavalry Corps, or a Headquarters, etc. This

A FIELD KITCHEN IN FRANCE.

BEEF FOR THE TROOPS.

procedure applied to most articles, but those requiring more careful guarding, such as medical comforts, wines and spirits, were kept separately. Petrol was also stored apart from anything else, and was carried in special trucks. Meat was not kept in the sheds, but retained on board the "frozen meat vessels" which acted as depôts and remained alongside until empty, and was then placed direct on the rail. Bread, again, was put on rail at the bakeries, and did not pass through the sheds. The trucks containing these three articles were added on to the trains when finally marshalled before departure. Bread for the army was baked in the open at the bases, in hundreds of field ovens, each capable of baking 90 loaves of 1¼ lb. weight—the daily ration. The field ovens, however, were gradually supplemented by steam travelling ovens, each capable of baking 4,000 loaves a day.

The never-ending stream of material which poured in necessitated the maintenance at each base of a very large staff, a great portion of which consisted of labour. Beside the ordinary fatigue parties of troops, and the military prisoners constantly employed on work which did not require any particular skill, there were large gangs of trained dock hands—stevedores and labourers—specially enlisted in the Army Service Corps for the unloading of ships and the stacking of cargoes. At one place there were 1,400 of such men at work daily on the quays. All were clad in khaki service uniforms, and the stevedores who worked on board the vessels wore a blue naval cap as a distinguishing mark. There were also small parties of tradesmen, such as carpenters, to repair broken cases, and needlemen to sew up sacks which had burst, and tally clerks, accountants, storemen, and foremen. A base supply depôt, therefore, had a peculiar life of its own. In activity it resembled a gigantic beehive, which in spite of its complexity was regulated by a spirit of the strictest order. This appeared all the more remarkable when it was remembered that the great majority of the men employed had never before been subject to military discipline, had been accustomed in peace time to live in an atmosphere of trade disputes, and had been suddenly placed under a strange authority imposing considerable restraint on the action of the individual. In those circumstances, the fact that the whole machine worked smoothly spoke wonders for the good spirit prevailing among all ranks. At one place the community

even possessed a bi-monthly journal of its own, the *Hangar Herald*, which attained a literary level of some merit, and was certainly not devoid of humour.

Bread was such an important item of supply that it was satisfactory to know not only that it reached the troops regularly but that its good quality was much appreciated. It kept well, as there was need it should do, as it could not be less than 48 hours old by the time it reached our men, and it was sometimes four days old. French ration bread, which possessed remarkable keeping qualities, was also supplied by the French Intendance, who also offered to supply cattle, although at a later stage, noting the excellent work the British soldier did on a beef ration, they themselves asked for help in the supply of beef to the French Army. It might be imagined that when the food supplies for a single day for a division had been loaded on train that the more important part of the work had been done. What followed after this, however, involved a nicety of organization of which the ordinary civilian has never dreamt. The whole of the methods subsequent to the loading on train at the overseas base had been modified in the years immediately preceding the war, mainly owing to the advantages obtainable by the use of mechanical transport. There was no mechanical transport in South Africa, and in addition to the disadvantages of dealing with the contractor of the old type, there was the slowness of animal transport to be overcome, while for meat supplies recourse was had to the ancient way of war, which was to drive cattle on the hoof with the troops.

In France, with troops moving in a civilized theatre of war, only a small percentage of whom were maintained in billets by the inhabitants, who were mainly independent of supplies requisitioned in advance or in the immediate neighbourhood, the means of supplying the troops was effected by rail and fast moving motor lorries, which delivered to horsed trains and then to the troops. No link in the new transport chain proved stronger than that furnished by the motor lorry of the internal-combustion engine type. The fact that so many of these vehicles were available for army service in the earliest stages of the war was an important asset to the British Expeditionary Force. It is true that the few hundreds which by arrangement with commercial users were handed over to the War Office were far short of the full numbers required, but for this the blame largely rested

CUTTING UP MEAT FOR STEWING.

Elliott & Fry.

MAJOR-GEN. SIR JOHN S. COWANS,
Quartermaster-General.

with a parsimonious Treasury. The motor lorries which were available were, however, of the utmost value, and their employment not merely for the transport of food supplies to the Front, but as motor ambulances for the wounded on the return journey, was an incalculable advantage in the opening stages of the western campaign.

At a later stage, when the demand for motor transport both for the armies in the field and for the home forces rose to a point for which no provision could possibly have been made on a peace footing, the mobilization of the home commercial motor manufacturing trade, with assistance from American, Swiss, and Italian manufacturers, enabled the call to be met. All British firms who were able to produce the right type of vehicles devoted the whole of their output to the national service, the Army finally being in possession of many thousands of lorries specially designed for the arduous work associated with the supply of armies in the field. The steps which made this great manufacturing triumph possible were taken years before the war. Consideration was given at a comparatively early stage in the history of the commercial motor vehicle to the needs of the Army in such a war as Great Britain was compelled to wage in common with her Allies. When the question of employing motor vehicles for army purposes was first discussed it was recognized that Great Britain possessed an advantage in having a larger number of commercial motors in service than any of the Continental countries with whom it was possible we should one day be at war. In view of the recognition given by all military nations to the important work which would fall to the lot of the Mechanical Transport Section in the next great war, this commercial supremacy was of immense value in enabling plans to be perfected.

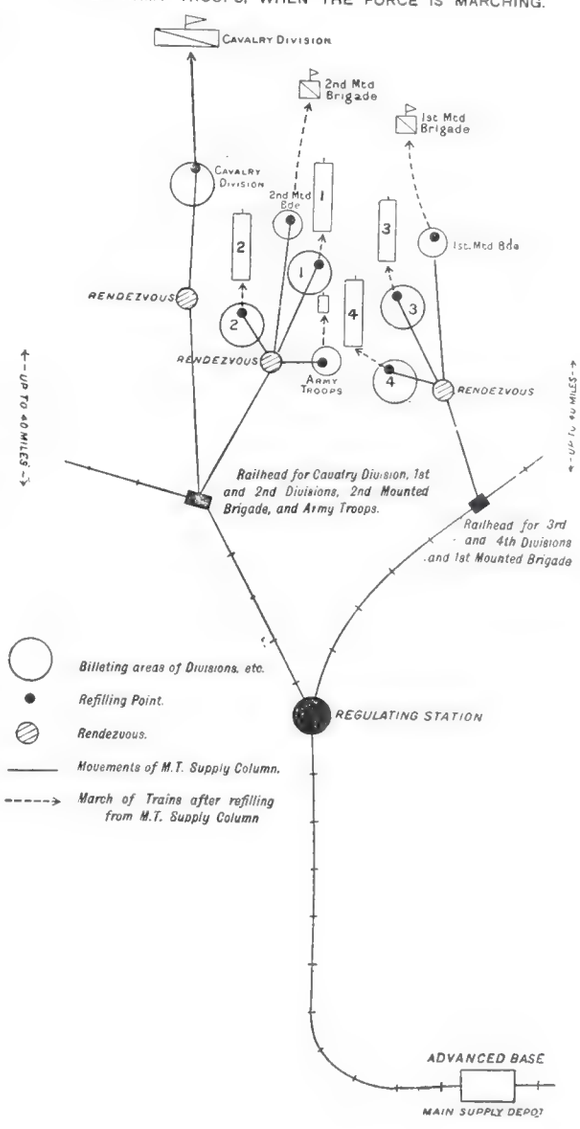
Several methods were open to those responsible for the organization of the new arm to ensure that the necessary number of motor lorries should be available in case of hostilities. The plan of maintaining in peace such a number of vehicles was very properly rejected, and it only remained to decide whether the vehicles would be obtained by impressment or by means of an arrangement whereby certain owners, as well as the leading manufacturers, were subsidized in times of peace for keeping and building suitable types of vehicles on the understanding that these would be placed at the disposal of the Government at short notice on the outbreak of war. The whole subject was discussed at the Imperial Motor Conference held in London in 1913, and the lines which military policy should follow in this field were definitely laid down. It was recognized that the steam-driven vehicle, owing to its almost insatiable appetite for water, would not be suitable for employment under war conditions. This threw the military authorities back on the internal combustion motor. In connexion with the subsidy plan of providing for the needs of transport in war, a method adopted by practically all the Great Powers as the cheapest, it was necessary to recognize—and this applied with special force to Great Britain—that confusion might arise from the many types in use. It was, of course, too late to remedy this disadvantage in the case of vehicles already in commercial service but which on terms were to be held at the disposal of the Government, but with regard to those which were to be constructed by manufacturers under the subsidy, Colonel H. C. H. Holden, as well as Captain Davidson, the Secretary of the Mechanical Transport Committee of the War Office, who took part in the 1913 discussion, was clear that not only the vehicles themselves but also as far as possible their component parts should be standardized. Two vehicles were

selected as types, both petrol-driven, both having wheels shod with solid rubber tyres and carrying useful loads of 3 tons and 30 cwt. respectively. Manufacturers were taken into confidence, designs were got out, trials held, and the scheme settled on a business basis. It was found that leading manufacturers were able to comply with the stringent requirements of the War Office as to speeds, weights, ability to climb severe gradients with full loads, and radius of action without fuel replenishment. From that time the future of British military motor transport was assured. When the war came and the industry was organized it was merely a case of multiplying types which had been already tested. Experience of actual war conditions was slight; a few motor transport units had been employed in the first Balkan War, and Italy had made use of some light type lorries in the Tripoli campaign.

Other nations were meanwhile adopting somewhat similar plans—modified by national conditions—to those of the British War Office. Great Britain was able to arrange for a comparatively low subsidy, but the French Government had to pay more, and Germany, which at the outset of the subsidy scheme had a comparatively small number of motor vehicles in service, had to pay high rates. It was a case of encouraging for military requirements an industry which was almost non-existent. The type subsidized was not the same in all cases; the French gave preference to a light lorry, Germany to a heavy type of vehicle—at least at the outset. The Austrian Government was influenced in its choice of lorry by the mountainous character of the country in which a war between it and another European Power would probably be contested. Russia—without a home industry engaged in the manufacture of motor vehicles—was compelled at a time when other nations were subsidizing home industry to rely for the needs of its army on foreign firms.

A point to which those responsible for British developments paid more attention than those doing similar work for Continental armies was that of standardization, and the advantages arising from the attention given to this point in facilitating repairs and replacements in the field, was found to be of no small importance in the case of the large fleet of lorries which during the war transported food supplies between rail-head and the refilling points. Standardization also made it possible for a driver to take charge of any vehicle instead of having his usefulness confined to the handling of a lorry of one type. Nor, in face of the rapid increase in the number of lorries required for army service, was there during the war any real lack of skilled drivers and mechanics. The great development of the commercial vehicle in Great Britain had made it necessary for purely industrial service to train large numbers of men to drive motor vehicles and to execute running repairs, and these men, who had been formed into an Army reserve to the number of between 3,000 and 4,000, came forward freely, and offered their services to the military authorities. It was a new type of soldier, and his advent raised afresh the controversy as to whether such a man should be trained to fight, or even whether he need be armed. There was an impression before the war that the greater mobility of the Army Service Corps arising from the use of mechanical

DIAGRAM ILLUSTRATING SUPPLY SERVICE IN AN ARMY OF 4 DIVISIONS, 1 CAVALRY DIVISION, 2 MOUNTED BRIGADES, AND OTHER ARMY TROOPS, WHEN THE FORCE IS MARCHING.



RATIONING THE TROOPS IN THE AISNE QUARRIES, UNDER FIRE.

Supplies for the troops subjected to gun-fire while being revealed by parachute-light shells.

transport would make it necessary for those serving with this force to be trained as combatants. Theoretically it was their duty to fight, if battle were necessary to ensure their supplies reaching the men at the Front, and if the need did not often arise during the war the A.S.C. man was always ready to defend his convoy, and on the occasions when he did so worthily upheld the honour of the corps. It was stated, indeed, that on one eventful night a fleet of lorries in a tight place charged a squadron of Uhlans at full speed—the lorries were capable of doing 20 miles an hour if the need arose—and dispersed an enemy unused to such tactics. For whatever purpose required the motor lorries did excellent work. They enabled the men to be supplied regularly with fresh meat and bread, an unmixed advantage, and they performed their journeys of anything from 60 to 80 miles a day; the lighter lorries serving the cavalry did a still greater mileage with persistent punctuality. This good performance was made possible by the provision of travelling repair shops for running repairs, and the facilities which existed for complete overhaul at several of the overseas bases. The extended use made of thousands of lorries enabled various vexed questions to be settled in the light of actual war experience. These included the desirability of employing mechanical transport except on roads, the best method of transferring supplies from motor lorries to horse wagons, the rules which should govern the selection of refilling points. It was easy enough to devise the system on paper, but to carry it out in practice day by day, particularly in the conditions which prevailed in the early stages of the war, was a task calling for the exhibition of many qualities by those in charge of the work. The experience of the Army Service Corps furnished practical illustrations of the different character of the problems of feeding an army on the march and in the entrenched positions occupied during the winter of 1914–15, when the arrangements of the rail-head and refilling points where the loads were handed over by the motor transport to the supply trains were more or less permanent.

LOADING A TRANSPORT.

Mr. Wedgwood Benn, M.P., at Alexandria, tasting the biscuits supplied to the troops for a day's rations on landing.

IN THE NORTH OF FRANCE.
A cup of coffee.

In the retreat from Mons, almost before the new organization had had time to settle down, the Army Service Corps was put to the severest test. From twenty to twenty-two hours' work out of the twenty-four was the rule rather than the exception, and the men were constantly in danger. Even the motor transport section, which was only concerned with the carriage of supplies up to the refilling point, was often under fire. An example of the character of this work during the retreat was quoted by a *Times* correspondent. He wrote:

> At Le Cateau on the night of August 25-26 one supply column lost its way in the rain and darkness when endeavouring to find its own brigade in the outpost line. It stopped at a road signpost, only to find on comparison with the map that the column was a mile outside its own outpost lines and in close proximity to the enemy. The feelings of the officer in charge can perhaps be imagined. One a.m., a dark night, a strange country, close to the enemy's lines, with five noisy lorries with thrumming engines and flaring headlights. It may be asked why, in the circumstances, headlights or any lights were permitted. It was a case of Hobson's choice. Either no lights and a certainty on a dark, wet night of driving into the ditch in the narrow lane and remaining there, or lights with the risk of drawing the enemy's fire. Eventually the vehicles were turned round, the right road discovered, and the units for whom the supplies were intended found.

The lot of the men belonging to the horsed Trains was often harder still, for the roads from the refilling point to the trenches were very frequently under the enemy shell fire, which was very accurate by day, and even by

TEA ON THE FIELD.

night, the range being known, the roads were constantly shelled with the assistance of searchlights. In order that the risks may be the better understood, the details of the work from the refilling points, that is the points to which mechanical transport is employed, should be described. The diagram on page 301 will indicate more clearly the system which

HORSED TRAINS IN THE NORTH OF FRANCE.

was in force. Refilling points were fixed at convenient places, sometimes at the head of the areas from which the divisions moved the same morning, sometimes in rear of the billeting area occupied at night. Here the mechanical transport unloaded on to the roads—there was not generally room in the roads for the direct transfer from lorry to wagon—and then returned to the next day's rail-head. When refilling points could not be determined upon, rendezvous were fixed for the motor transport, and instructions given there as to refilling points. Here the horsed Trains of the second line transport took over the supplies. It was their work to take them up to where the field cookers and cooks' wagons were a-waiting. The supplies were then taken over by the Regimental Transport, where they were taken over by the regiment, the Quartermaster of which superintended the division of the rations into the quantities for the various platoons and companies.

MEALTIME ON THE BATTLEFIELD.

British Staff officers have an impromptu lunch near the firing line; a sergeant outside his "dug-out" (top picture); and food being brought in to a man on duty in a trench.

It must be understood that there were several variations of this system in vogue; and the daily supplies were sometimes drawn from Reserve Parks instead of from railroads, when it was not possible owing to the local war conditions to push the railway supply trains sufficiently far forward. On other occasions they were delivered direct to Regimental Transport without the intervention of the Trains or *per contra*. Trains sometimes drew supplies direct from railhead without the intervention of the mechanical transport. These variations served to illustrate the elasticity of the normal system of supply. In the case of Cavalry horsed Trains were not employed, but a double echelon of light lorries performed the whole of the road transport on the one day, and back to rail-head the next, and delivered supplies to the cooks' wagons of the first line transport.

It was a recognized necessity of military operations, however, that an army must be rendered independent of its supplies for at

A MIDDAY MEAL AT THE FRONT.

least a short period. This principle was, of course, put in force during the European War. Each man carried on him one day's complete reserve—the iron ration, as it was called. This was a tin containing preserved food and took the place of the old emergency ration, which was a concentrated form of food. And all who had experience of it agreed that the new ration with its preserved meat, biscuit, Oxo, and other foods was an improvement on the old. In addition to this day's supply, which was never used except in extremity and under special orders, there was in the cooking wagons of the various units the unexpended portion of the current day's ration, in the "Trains" one complete day's ration, one extra grocery ration, and one day's grain for horses, or in the mechanical transport one complete day's rations and grain. The details of the arrangement might be altered, but, broadly speaking, it might be said that on any given night a commanding general knew that he had on hand supplies sufficient to last three days. Such a reserve was vital during the retreat which marked the early period of the war. Try as hard as men would, the service of food could not always be performed, in spite of risks which were cheerfully endured. One of these occasions was the last day of the battle of Mons. The iron ration had to be consumed, and it was an extremity to which the men were rarely driven.

Whenever practicable it was the duty of the requisitioning officer with each brigade to supplement the ration with supplies purchased locally. The large purchases included cattle, hay, wheat, vegetables, oats, and straw, all of which were readily furnished by the inhabitants. Fruit was plentiful during the early period of the war and was freely given to the soldiers.

The following incident narrated in *The Times* indicated the dangerous character of this work. Two supply officers during the retreat succeeded in requisitioning some newly baked bread, which was loaded in the cars. Under a very heavy rifle and shell fire this bread was carried rapidly along the line behind the barricades manned by the troops and issued to the soldiers. Rifle and shrapnel bullets knocked up the dust in the road along which the cars were driven. One car, which was hit in two places, but not seriously damaged, conveyed wounded men from the firing line to the hospital. In addition to the danger from bullets and shells, the cars ran considerable risk of damage from the condition of the road, strewn as it was with pieces of stone, brick, chimney pots, glass, and telegraph wire brought down by the shrapnel and high explosive shell.

The supply and requisitioning officers in their cars had often to work along the front and on the flanks of the main bodies of troops. Much of the work was done at night, and considerable risks had to be run from small detached or scouting parties of the enemy. One morning in the dawning light and in a thick mist a car ran into an outpost of Uhlans, muffled up in their heavy cloaks and half-asleep. Before they realized that the car was British it had been smartly turned round and vanished again into the mist.

A letter written by an Army Service Corps requisition clerk of the 5th Divisional Train of the II. Army Corps threw a vivid light on the difficulties of the work of provisioning an army in retreat, and was a reminder that the duties of the Army Service Corps included fighting as well as food supply and transport :

"All went well," he wrote, "until we got into Belgium, where the first hitch occurred. We had arrived at a place called Dour, where General French had made his headquarters. We had just completed our purchases when the troops started their retreat, the date being August 24. My officer had left the chauffeur and myself in the car and had gone off on duty, leaving us without orders. We could not move, and the troops were fast leaving the town. General Smith-Dorrien was the last to leave, and, seeing us in the car absolutely isolated ordered us to leave the place. The Germans were then within half a mile of us, and shells were bursting over our heads. I told General Smith-Dorrien about our officer having gone on ahead—I can tell you we did not like leaving him—but while we were starting up the car he arrived in another officer's motor, and we all made our way out of the place as fast as we could From that time we retreated for 12 days, with the Germans close on our heels The Germans by their aeroplanes always had our position 'pat,' and I can tell you they were most anxious to get hold of us, as the train consisted of about 40 motor-lorries stocked with food and ammunition, and several hundred horse wagons similarly loaded. We were chased day and night by the Uhlans.

"At length came the critical time. At a little town a few miles from St. Quentin, where a big battle had taken place, it was reported that the Uhlans were a mile away. As the horses and men were so fatigued, our colonel decided to stay and defend the place, and chance to fate. The wagons were all drawn up in the streets, and we were detailed with loaded rifles to our places. I with five others had a small lane to defend. The troops were all ready, and all was in perfect order. The inhabitants of the village were all taken into the little church, and a special service was held. I can tell you I shall never forget my feelings on this night. The church organ was playing and the choir was singing. It was now about 10 o'clock, and pitch dark. We knew the Uhlans were very near, and expected a rush at any moment. We had very little room in the place, and were threatened with a stampede of the horses, which were very restless. Time wore on and we were not attacked. Day broke, and still no attack was delivered, and we were again on the road before they discovered how small a force of men was guarding such large and important supplies. We had many scares like this during the retreat. Once at a place called Bavag, in the North of France, we were just about to

HOT RATIONS COOKED ON THE MARCH.

A field kitchen fitted with portable ovens by which food and tea can be served immediately a halt is called.

CUTTING UP THE BREAKFAST BACON.

TRANSPORT WAGON IN BELGIUM.

issue rations to a brigade of artillery who were going into action at 3 a.m. when it was reported that we were surrounded by German cavalry. The order was given to burn the whole convoy to prevent it falling into the enemy's hands. But by a clever ruse of one of our officers we were enabled to get the convoy away, and off we went like the wind, with the Germans behind us. We had to cross a railway bridge. All the transport, with the exception of 30 motor-lorries full of supplies, passed over in safety. Then a rush was made by these vehicles, and 28 of them had lumbered into safety when the bridge was blown up. The other two lorries were left on the other side, and fell into the hands of the Germans. Two officers and eight men were captured and, so far as I know, have never been seen since.

"We have had many adventures and great risks during our short stay. We started to advance again on September 6, and as a send-off—on a Sunday morning by the way—a German aeroplane dropped three bombs into our camp, one exploding within 50 yards of us. The feeding of the troops and horses is a great factor, and one of the most important items of the day. We take the food now right up into the firing line and issue to the troops with the shells bursting over our heads."

This was no exceptional case, but a plain record of what was happening to many units. Meanwhile, the administration had to cope with the threat to the lines of communication caused by the rapid German advance, and it became necessary to change the sea bases. Boulogne became impossible, and later on Amiens and Havre, a fresh base being established at St. Nazarre. It was an arduous and anxious time for all connected with the provisioning of the army, for while the vast accumulations of stores were being shifted from one base to another, and the whole system of communications between the sea bases and the Front was subjected to frequent changes, and regular daily supplies could not go forward to the army which was fighting rearguard actions so gallantly, it still had to be fed. Until the new line of communications was established the difficulty was overcome by diverting railway trains to a new line through Villeneuve St. Georges, in the neighbourhood of Paris.

"The trains," wrote the Special Correspondent of *The Times*

"were worked round to a position in rear of the army, and rolled up one by one until the establishment of the new bases permitted reversion to the original plan of supply. It would not have done to have dumped on the army at the front the supplies for a whole week, for neither lorry transport nor horse transport would have been able to handle them. The army is best served in littles at a time, for accumulations cannot be moved if an army advances, while they have to be destroyed if it retreats."

While the army was moving forward after the check to the German advance on Paris, rail-heads were being frequently altered and rendezvous and refilling points changed. What it meant to adapt a new rail-head within a few hours to the accommodation of a vast amount of rolling-stock, and for loading and unloading lorries in the shortest possible time, only those who have had charge of the work could realize. Perhaps the only rail-head available was a little wayside station, and it was necessary to improve entrances and exits to enable the work of transferring supplies from rail to road transport to be accomplished. As many as sixty or seventy three-ton motor lorries had to be assembled for the clearing of the divisional type trains dispatched overnight from the overseas base, and a good deal of organizing ability was necessary to enable the mechanical transport to load up and leave rail-head without causing confusion. These at one period were daily problems. As stated above, the ideal method was to have them at the head of the areas from which troops had just moved. This

arrangement enabled the supply sections of the trains to be filled after they had quitted the areas where they spent the previous night, and thus any retrograde movement of the horse transport was obviated. When troops were stationary, except during battle, it was found preferable to send the supply columns into brigade areas where the refilling points were placed, but during battle it was necessary to send back the trains some distance to refill from the supply columns, more than one refilling point being, if possible, arranged for each division, with the object of reducing to a minimum the movements of the supply sections. In the field, however, it was not so simple a task as might appear from this statement. An officer writing under date September 17, 1914, gave the following account of the conditions under which the British Army Service Corps was then working. He wrote:

> There has been a great battle raging all along the front, a distance of about 120 miles. Our division is about in the centre, and we have had a hard time. As regards our own A.S.C. work, we load up the horse wagons of the train from the mechanical transport vehicles in this town, which is the refilling point. The whole road from here to the river Aisne is under very heavy shell-fire all day, and it is only at dusk possible to move out. Even then we often come under shell-fire; the guns are laid by angles—the distance is, of course, known, and at frequent intervals during the night shells are fired on the road or at the village on the way, or at the bridge-head 4½ miles from here. The enemy in his retirement blew up the bridge over the river, and our engineers have built a pontoon one to replace it. This bridge, though, is under the enemy's guns, who shell it with great accuracy. Last night on starting out, a pitch-dark night and raining hard, we could see the frequent flashes of the enemy's artillery, and hear and see the bursting shells. The whole of the road is lined with dead horses, and the smell is too dreadful for words. We had to halt for some little time, as a village through which we had to pass was being shelled. These high explosive shells make a most terrifying noise, and do dreadful damage when they do hit something. When the shelling stopped we moved on, and finally reached the river. It was impossible to get loaded wagons across a very shaky pontoon bridge in pitch-darkness with very steep banks down to it and no side rails on it. The supplies had therefore to be dumped on this side. This was a matter of great difficulty in the dark and wet, a very narrow road, choked in places by dead horses, ambulances and pontoons also there waiting to go forward, and a perpetual stream of wounded men being carried or helped past, going in the opposite direction. So black was it that I could not see my hand before my face and one would walk right into a horse without seeing it. The only thing which showed up was the white bandages of the wounded. Getting the wagons round in the darkness and the crowd at bridge-head was very difficult, and often the wheel was blocked by coming up against a dead horse.
>
> To add to the difficulty, one's nerves were on the *qui vive*, waiting every second for the enemy to resume shelling. One shell among that congested crowd would have had dreadful results. Just before we arrived shells had dropped there. . . . We had not left the place more than half an hour when we saw the flashes of the guns behind us. . . . We got back to this town at 3.30 a.m. This is what goes on every night. Leaving at dusk, getting back at 3.30 a.m., and hoping the enemy will refrain from shelling until we are back.

Thus day by day, and night by night, the task of feeding the army continued. It was wonderful to witness the cheerfulness with which the men faced dangers of the kind indicated in the letter quoted, and there were often worse experiences than these. To be roused at 2 a.m. on a cold dark wet night to take supplies up to trenches, the approaches to which were being shelled, was no uncommon experience. Nor was it rare for the men who carried out duties of this character to bring back their own wounded as well as the disabled from the trenches they had served with food supplies. The Army Service Corps man did

LOADING UP WOOD.

A TRAIN OF MOTOR-LORRIES OF THE ARMY SERVICE CORPS CHARGING A BODY OF GERMAN CAVALRY IN FRANCE.

"A portion of a supply column was cut off by a detachment of German cavalry, and the officer in charge was summoned to surrender. He refused, and, starting his motors off at full speed, dashed safely through, losing only two lorries."

not figure, except upon the rarest occasions, in the lists of those who received decorations for gallantry, but it was not because he did not when the opportunity came to him, or he made an opportunity, prove himself less a hero than those whose main function is to stand in the firing line. The A.S.C. men lived during the retreat and subsequent advance, as one of them expressed it, with "loaded rifles ever by their side." They were veritable Jacks-of-all-trades. One recorded that he had been by turns clerk, scout, and dispatch rider, and he appeared to have fallen quite naturally into each of these rôles.

At a later period, when the war of trenches commenced, the Army Service Corps took advantage of the fact that they were supplying troops standing in more or less fixed positions to improve the already good rations which were being served. The soldier lived well during the lulls in the fighting; bacon was provided for his breakfast, he lunched on bread and cheese, dined on hot meat, vegetables, and bread, and, of course, had jam served with his tea, varied occasionally with butter as a substitute. At certain times, when on duty in the trenches, he had pea soup once or twice a week, as well as a rum ration and extra tea and sugar. Cigarettes as an alternative to tobacco were also served out, and with them matches. A word might be written about the supply of water; this was obtained from local sources, and for taking the supplies up to men in the first line empty petrol tins formed an excellent receptacle. The utmost care had to be taken with regard to the selection of the streams from which water was drawn to ensure the purity of the supply.

It has to be borne in mind also that the fine catering of the Army Service Corps was often reinforced by parcels of food sent by relatives and friends who feared that their own particular private Tommy Atkins was not getting quite enough to eat. And that is a reminder that with his daily bread the man in khaki regularly received his letters from home. The trains going up from overseas base to rail-head invariably had an additional wagon or so for the soldiers' letters, and these were taken over by the supply Trains and sorted for delivery to the men. It was one of the little things which the Army Service Corps cheerfully added to its multifarious duties, and which found its reward in the intense appreciation by the men of the daily post.

It might have been imagined, and the voice of rumour insisted that such was the case, that the feeding of the Indian troops presented difficulties. It was definitely stated at one period that this fine addition to the army in France would eat nothing that had not been cooked in goat's milk, wherefore 50,000 she-goats must bleat eternally behind the Indian divisions. As, however, was clearly pointed out by *The Times* Special Correspondent, writing from Paris in November 1914, the feeding of the Indians was subject practically only to two important restrictions, both concerning Mahomedans. One was that they should be supplied with nothing containing pork or relating to pigs, and the other that all animals for their consumption should be given

BRIG.-GEN. E. E. CARTER,
Director of Supplies Overseas.

the *halal* (throat-cutting) by their own butchers. Fortunately, both these matters insisted upon by the Koran were easily arranged. The goat story had this much foundation—that most of the Indians prefer goat flesh to any other. The purchase of the necessary number of these in France presented very little difficulty.

The record of the Army Service Corps in furnishing and transporting supplies for an army which, in spite of the heavy drain of casualties, continually swelled in numbers was a performance of which those associated with the work have every reason to be proud. Before many months had passed the numbers serving in France had increased to proportions of which the British Army had no previous experience, but from the outset the work was well done and it was generally admitted that our army was magnificently fed. Those who

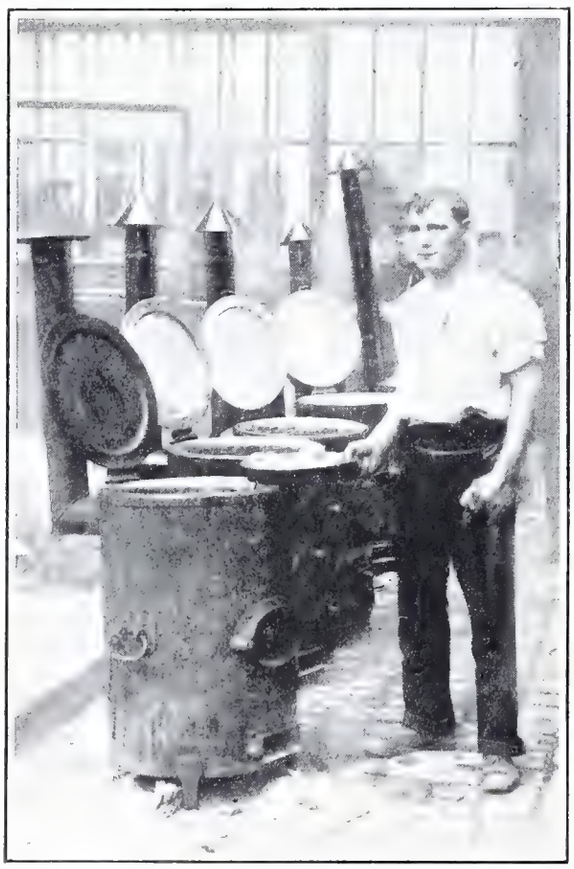
BLUEJACKETS IN BELGIUM.
Handing out "bully beef."

were in charge of the work in France, of whom Brigadier-General Boyce, Director of Transport Overseas, and Brigadier-General E. E. Carter, Director of Supplies Overseas, should be mentioned, handled their departments with conspicuous ability.

There was also at a later period the need for the Director of Supply and Transport at the War Office to organize and carry out the provisioning of the considerable army engaged in the Dardanelles campaign. This constituted an important addition to the work of the Army Service Corps, as it implied the transport of the provisions for the troops serving in this field over a comparatively long sea passage, requiring the services of a large number of food transports. The fact that for the army on the Continent as well as for that in the Gallipoli Peninsula nearly the whole of the food supplies had to be transported overseas in waters where enemy submarines were operating, and that so few food ships were lost, was a remarkable tribute to the influence of sea power on military operations.

In the case of the Dardanelles campaign the fact that all the supplies had to be sea-borne was only a part of the problem that had to be solved, as at the actual seat of operations the supplies had to be landed on beaches which at the commencement of the campaign and for some time afterwards were exposed to the enemy's fire. It is true that the land transport was only over short distances, but the absence of roads made it necessary to move by hand all the supplies for the Forces ashore. To land loads, even if the weights were limited to 80 lb., on a shore destitute of port facilities, and then to transport supplies to troops occupying positions in the hills under fire, was different kind of work to that which had to be carried out in France. It was done, however, as all that which had fallen to the share of the Army Service Corps was carried out during the European War, with the determination that the men in the fighting line should not go ill-fed. The early days here were perilous and fateful ones, but as the Allied Forces progressed and pushed the enemy away from points where they could command the beaches, the landing of provisions became an easier task, which was rendered still lighter when it became possible to construct landing-stages and to make paths up the hillsides, in the scaling of which so many of those who took part in the first landing were put out of action.

Mechanical transport was available for the Dardanelles campaign had it been possible to employ it. A fleet of lorries was ready in Alexandria. Nor would horsed Trains have been of any service under the conditions



PREPARING FOOD FOR THE NAVAL FORCE IN BELGIUM.

obtaining in the Gallipoli Peninsula, and recourse was therefore had to an Indian pack mule corps, which was withdrawn from France, and to a second mule corps raised on the spot. Both these transport units did good work, as the mules could go anywhere and climb the steepest cliffs and hills.

When consideration is given to the fact that within a period of twelve months the British Army was expanded from a peace strength of about 150,000 to a total of several millions serving both at home and abroad, the manner in which the troops were provisioned from the first day of war will stand as a permanent record of the efficiency of the organization which, while it was carrying out this work, had also to enlist and train men for the many varied duties which had to be performed.

Feeding the Navy.

It was a piece of good fortune that, after having been a source of trouble for a very long period, the victualling of the Navy had during the years immediately preceding the war been reorganized on a basis which gave general satisfaction. The new regulations came into force in October, 1907, and although it was feared that the interference with the time-honoured system of "savings" might cause trouble, a very short experience of the reformed victualling showed that it was likely to be an unqualified success.

What had to be done, therefore, on the outbreak of war was not, as in the case of the army, to put into operation an entirely new scheme

KITCHEN ON A CRUISER.

but to expand an existing one, grafting on to it the additions and making the modifications necessary to the conditions created by war. During war, as in peace, the ship was the home of the bluejacket, and although many of the little luxuries of ordinary times were thrown overboard with the pianos which were bundled into the North Sea when decks were cleared for action, the sailor, like the soldier, was rather better fed than before. There was also this difference, that while an army in the field could only sustain itself for a few days without fresh supplies from the base, a warship could be and was provisioned for a period which, if the need arose, could be reckoned in months. There is this parallel between the provisioning of armies and the victualling of ships that while an army, except for the shortest period, must

REPLENISHING THE LARDER ON A WARSHIP.

depend on the maintenance of lines of communication, in the last resort a fleet which lacked the command of the seas must starve. The fate of the German commerce raiders illustrated the truth of this obvious contention.

The task before the Director of Victualling, Mr. J. H. Brooks, and Sir F. W. Black, the Director of Contracts, and the staff of their departments, was, therefore, the application of an existing system to new conditions. Many strenuous days and nights were spent in putting the organization on a war footing, but there was no hitch. The work was the more arduous as the Victualling Department was responsible not only for the feeding but for the clothing of the men and for the provision of the mess traps, cooking utensils, etc., of both officers and men, for the supply of soap and tobacco, and for the ships' libraries. In addition, there was the administration of the material and personnel at the Victualling Yards, and the maintenance of supplies to fleets on foreign stations such as the Mediterranean, China, and the Atlantic trade routes.

These constituted duties of no light order when their fulfilment had to be interpreted in terms of war, but the ample stocks of provisions and clothing accumulated in days of peace stood the strain until delivery commenced to be made under new contracts. Henceforth, if all was not quite plain sailing, and long watches at the Admiralty were the rule rather than the exception, those in command made light weather of the task entrusted to them. It was not merely that it was necessary to provide for the victualling of the larger number of warships in commission. This was simple enough; the difficulty lay with the very large number of auxiliary ships and subsidiary shore services that were called into existence at the shortest notice by the exigencies of the war.

FLOUR FOR THE NAVY.

Carrying bags of flour on to a warship. Inset: Barrels of flour for the bakehouse.

FEEDING THE NAVY.

Carrying bread, bacon and condensed milk on board. Inset: Bakehouse on a warship.

For many of these auxiliary forces special arrangements in the matter both of the feeding and clothing of the men had to be evolved according to their special conditions, the naval system being inapplicable. It might be pointed out, too, that not only at the commencement but throughout the course of the war, it was the clothing problem which was the more acute, due mainly to the unprecedented demand for new kits at a time when the army authorities were making abnormal calls on clothing factories.

All these difficulties were, however, gradually overcome, and the victualling of the ships during the war gave every reason for satisfaction. If the bluejacket compared his lot with that of the old-time sailor, the men who sailed with Drake and Howard to defeat the Spanish Armada, or those who manned the ships of Nelson's day, he would have realized more fully the change that had come over navy victualling. The old plan was to have victuallers whose business it was to accompany the fleet, but it often happened that the victualling ships could not find the fighting ships, whose crews were often near starvation. When they were in company the warships had not merely to engage and defeat the enemy but to defend their own food supplies. It is recorded in Oppenheim's account of the administration of the Royal Navy that in April, 1513, "a convoy reached the fleet off Brest just in time, for of ten days before there was no man that had but one meal a day and one drink." Pursers moved through naval history "loaded with the maledictions of many generations of seamen."

The truth was that until the year 1850 there was no Victualling Department in existence. It was left to individual enterprise, and as the stores were obtained by a system of purveyance or forcible purchase, there was not much desire on the part of traders to supply food for the consumption of the Navy. The King's Purveyor fixed the price that he was willing to pay, and it sometimes bore no relation to the market value. The theoretical allowance to the seaman if he could have obtained it was, however, by no

means niggardly. In the year 1545 a pound of biscuit and a gallon of beer per day were allowed to each man, and 200 pieces of flesh to every hundred men on four days in the week. Beer the sailor invariably demanded. Howard had sound views on the victualling of his fleet. His plan was to provision each for six weeks, but if he obtained supplies for half this period he was fortunate. The victualling of the fleet was too often made a matter of Crown patronage and looked upon as a source of profit by those obtaining appointments. In the year 1496 the provisioning of war vessels was in the hands of one John Redynge, Clerk to the Spicery, and a few years later it was entrusted to the tender mercies of a Master of the Horse.

The formation of the victualling branch of the Navy into a separate department took place in

ON A WARSHIP.
Taking in Food Supplies.

about the year 1550, but there is no doubt that the real credit was due to Henry VIII., who had a very clear conception of the need for taking the provisioning of the Navy out of the hands of irresponsible agents who were under no real authority. It was by Letters Patent of June 28, 1550, that Edward Baeshe, who had formerly been an agent for the provisioning of the fleet, was appointed General Surveyor of the Victuals for the Seas at a fee of £50 a year, 3s. 4d. a day for travelling expenses, and 2s. a day for clerks. Victualling storehouses were afterwards acquired at Ratcliff, Rochester, Gillingham and Portsmouth, and in 1560 fresh premises were taken at Tower Hill. At this period the Surveyor of the Victuals was, as recorded in Oppenheim's account of the administration of the Navy, paid 4½d. a day for each man in harbour, and 5d. a day when at sea. For this he had to provide per head, on Sundays, Mondays, Tuesdays, and Thursdays, one pound of biscuit and one gallon of beer and two pounds of salt beef, and on the other three days, besides the biscuit and beer, a quarter of a stockfish, one-eighth of a pound of butter, and one-quarter of a pound of cheese. It is added in Oppenheim's chapter on Elizabethan administration of the Navy that :

> Fourpence a month per man at sea and 8d. in harbour he (the surveyor) was to allow for purser's necessaries, such as wood, candles, etc. . . . He undertook not to use the right of purveyance unless ordered to victual more than two thousand men suddenly, and agreed to keep in hand one month's provisions for a thousand men. . . . He was given the use of all the Crown buildings belonging to his department, subject to his keeping them in repair, and was permitted to export one thousand hides in peace time, and as many as he should slaughter oxen during war.

Baeshe did not appear to have found his appointment remunerative, and when he gave notice to determine his contract in 1586 he anticipated a loss on the victualling. He was an old man at this time, and when the Government stores were handed over to his successor, although the Armada was already expected, there were only 12,000 lbs. of beef and 2,300 stockfish in hand. This partly explains the bitter complaints of Howard with regard to the poor victualling of his fleet. At other times, however, various edicts made it clear that the Government storehouses were overstocked, in which case merchant ships were compelled to buy Government provisions. In 1596, indeed, an order was made prohibiting butchers in the City of London from selling meat to ships until the Government stores had been sold out, and all outward-bound ships had to produce a certificate of purchase before they were allowed to leave the river.

Disaffection, merging into open mutiny, was often associated with the character of the provisions served out to the fleet, and cases were recorded of crews having gone ashore and wrecked the houses of those responsible for supplying unwholesome food. Matters in regard to victualling were probably at their worst during the Commonwealth, although the lot of the Commonwealth sailor could not have been inferior to that of the men who took part in the attack on Cartagena in 1741, as described by Smollett, who himself served on board a ship of the line which was present on this occasion. The seamen, stated Smollett : "Languished for five weeks on the allowance of a purser's quart

per diem of fresh water for each man: their provisions consisted of putrid salt beef, to which the sailors gave the name of Irish horse; salt pork of New England which, though neither fish nor flesh, savoured of both; bread from the same country, every biscuit whereof, like a piece of clockwork, moved by its own internal impulse, occasioned by the myriads of insects that dwelt within it; and butter served out by the gill that tasted like train oil thickened with salt."

That this was no fancy picture there was other evidence to prove. A method of robbing the sailor which was only abolished in the year 1824 was by the institution of what were known as banyan days, on which no meat was issued, the days selected for this enforced abstinence being Mondays, Wednesdays and Fridays. The men who fought with Nelson at Trafalgar suffered like their predecessors from inferior victualling as compared with the European War of 1914, but theirs was a great improvement on the lot of the older seamen who were made to give practical illustration of the old saying that "nothing will poison a sailor." Not, however, until quite recent years could it be said that the men who man the British ships of war were well provisioned, unless it were out of their "savings" and their pay. It was not until the year 1832 that the business of victualling the fleet was taken out of the hands of the Navy Board and the Commissioners of Victualling, and so passed under the direct control of the Admiralty. Many changes were made in subsequent years, and at one period certain articles, including biscuit, chocolate, mustard, pepper, cooperage articles, and oatmeal, were manufactured at the victualling yards; biscuit, oatmeal, chocolate, mustard and pepper at Deptford, and other stores at Gosport and Plymouth, although the famous Navy biscuit was manufactured at all three yards. Many visitors to the Admiralty during the period of the war had the opportunity of inspecting a sample of the naval biscuits and chocolate; one of the biscuits which was reputed to be still perfectly fit for consumption was baked at the Royal Clarence Yard as long ago as the year 1852. The only remnant of this old system which remained in existence during the Great War was the manufacture of chocolate, which was still continued to be made at the Deptford yard.

The method by which the actual victualling of ships was carried out during the war was, and should remain, a naval secret. The practice during years of peace was for provisions and clothing to be supplied to ships on demand from one of the yards, the ships coming to port for that purpose, and stores being transferred by lighters from yard to ship. That was a system which for many reasons had to be discontinued during the war.

Up to the year 1907 the sailor, like the soldier, had a fixed ration. This was generally unpopular, the main objection being that the man could not obtain what he wanted. The committee whose work was reflected in the 1907 reforms introduced a standard ration comprising a minimum of essentials for each man, this being supplemented by a messing allowance, which the men were allowed to spend in their own way, either in the purchase of more Government stores from the ship's paymaster or by purchases from the canteen. The standard ration included 1 lb. of bread, ½ lb. of fresh meat, 1 lb. of vegetables, 4 ozs. of sugar, ½ oz. of tea, ½ oz. of chocolate, ¼ oz. of condensed milk, 1 oz. of jam, and ⅛ of a pint of spirit. This might be regarded as a type ration, as many substitutes were allowed. Under the old system the daily allowance was considered to be worth 9½d., plus the spirit ration, and under the new method this amount was divided up

MEAT FOR THE NAVY.

by an allocation of 5½d. for the minimum allowance, leaving a messing allowance, which took the place of the old "savings," of 4d. per day. This was increased during the war to 4½d. per day, and, in addition, the ration itself was increased by various special issues. The marine received special treatment; while he was afloat he was provisioned in the same manner as a sailor, but when serving ashore he had the soldier's ration.

It was not merely the victualling itself that had been improved in the years preceding the war, but with the introduction of the new system improvements were also made in the cooking and messing arrangements on board warships. In all modern ships steam cooking was introduced and better galley accommodation was provided, as well as a preparing room or cook's kitchen where the dinners of the ship's messes could be prepared by the staff of ship's cooks, whose numbers had been increased for this purpose. Bakeries were introduced into the fleet at a comparatively late date, bread formerly being obtained from a shore source. During the war, however, and for some years previously, all the big ships baked their own bread, and wherever possible supplied fresh bread to auxiliary vessels accompanying the fleet which had no bakeries on board. Fresh meat was supplied either from the big abattoirs established at the victualling yards of the home ports or from Admiralty contractors at other places, and frozen meat when necessary was furnished from ships specially chartered for the purpose. When it came to a choice of meat it was found many years ago that the bluejacket had a distinct liking for beef and that he preferred it fresh, even if tough. That the Navy was well fed during the war and that supplies reached the fleet regularly may be gathered from the statement that it was hardly ever necessary to have recourse to preserved meat. Indeed, under modern conditions it has rarely been necessary for preserved meat to be used except as an additional ration and for the purposes of an emergency reserve on board ship. Special attention was paid to the provisioning of submarines, which were always liberally provided, and never more so than during the war. Apart from the ordinary Navy victualling, there were additional rations, consisting of foodstuffs with special dietetic qualities which, while regarded as an emergency ration, included tins of soup and other luxuries. Indeed, the cooking arrangements on some of the larger submarines were quite excellent and messes were supplied with fresh meat. The idea that submarine crews lived on "bare Navy" is quite erroneous. The great increase in the quantities of

PROVISION STORES FOR WARSHIPS.

HOISTING BEEF ON BOARD A WARSHIP.

victualling required after the Navy was mobilised for war may be gathered from the statement that the supply of various commodities was more than doubled, the quantities used during specified periods increasing in one case from 18 million pounds to over 40 million pounds, and in another instance from 9½ million pounds to more than 20 million pounds. As might be imagined, the purchase of enormous quantities of provisions and clothing of all kinds, which went into store at the victualling yards and were thence issued to the fleet, taxed the organization of these yards to the utmost. This was particularly the case at Deptford, where, owing to the fact that the establishment was an old one—the depôt was built on part of the site of the old Deptford shipyard where Peter the Great served an apprenticeship to shipbuilding—the storage accommodation was unsuitable to modern requirements. To overcome this difficulty four large additional sheds were built during the war and served to relieve the pressure. It was necessary to make a visit to this or one of the other victualling yards to obtain a real insight into the character of the demands made for victualling and clothing during the war.

It was expected that the changes in the victualling system would be followed by the adoption on shipboard of the general mess, or restaurant system, as adopted in the American Navy. This method, under which the whole of the messing arrangements for a ship were placed in the hands of a competent officer, was adopted for naval establishments ashore. It was found that if the men were willing to hand over their messing allowance to be dealt with in this manner they obtained a much more varied diet. At sea the general mess was tried on one or two ships, but it was not popular, and a reversion was made to the small mess of from 15 to 25 men, these being run by the men themselves, who selected one of their number as caterer. The work of running the small messes was to some extent simplified by the provision of the cook's kitchen.

The canteens, long a feature of the Navy, remained in full force during the war. It was made clear in the enquiry conducted by Admiral Login's Committee that canteens were an essential part of the system of naval victualling, and indeed it was common knowledge that the business transacted by the canteens was increasing at a rate which threatened to relegate the official victualling to insignificant proportions. Figures which were laid before the committee showed that while the expenditure on official victualling had declined to £850,000 a year, the men spent out of their "savings" with the canteens during the same period the sum of £1,500,000.

The establishment of the canteens arose out of the admission of the Admiralty of the time, by legalising the savings system in 1799, of their inability to provision the men properly. There is no doubt that for a considerable period the men looked with suspicion on official foodstuffs, and therefore preferred to draw the money equivalent and spend it at the canteens. The character of the canteens, owing to different contractors being employed, varied very considerably: in some cases goods of poor quality were sold at exorbitant prices, while in other ships the canteens were so well managed as to be a positive boon. On board ship there were, of course, only dry canteens, but the wet canteen was permitted at shore establishments. The only alcoholic drink which the seaman could obtain on board ship was the spirit ration, and, although by recent regulations a man could have the money value of this instead of the spirit, he generally preferred to take his tot of rum. It was recognized that in any changes which might be made the canteens must be preserved, but an excellent step was taken in bringing them under the control of the Director of Victualling. This meant that the contractors were fenced in by regulations whichwere all to the benefit of the men, while the contractor's own position was made easier in some respects. With Admiralty control there came an undoubted improvement in the way the canteens were conducted, and as this was coincident with improvements in the general victualling system, the outbreak of war found this important department developed to a higher degree of efficiency than at any previous period.

A visit to any one of the great victualling yards at any period after the rush of war demands had been met would have revealed the fact that these establishments were amply stocked for a war as to the length of which it was not possible to make predictions. As in the case of the supply depôts for the Army, a very thorough system of inspection of stores was in operation. Not only was all food tested and supplies, if necessary, rejected, but all clothing materials were examined and tested for strength and quality. No risk was run of defective stores being accepted for the Fleet, and the loss through condemnation of stores, chiefly arising from returns from ships, was reduced to negligible proportions. The Director of Victualling, although not a purchasing officer, was responsible throughout the war for making indents upon the Director of Contracts for the necessary supplies, and he was also charged with the duty of the framing of the estimates for and supervising the expenditure on the Victualling vote.

Even during the long years of peace the possibilities of war were not left out of sight. If the Navy was ready when the supreme moment arrived it was because the strategy which would govern its movements in the event of war had been long since decided. The plans for the victualling of the Fleet were by no means the least of these decisions. The Director had always been in close touch with the Director of Naval Intelligence and the Director of Transports as to the needs of war, and those in charge of foreign naval stations knew what had to be done on the outbreak of hostilities. That the work was well done, both at the Admiralty nerve-centre and at the naval outposts, is a claim warranted by the experience of the war.

BRINGING MEALS TO THE MESS DECK.

CHAPTER LXXIII.

THE FIRST "INVASION OF EGYPT."

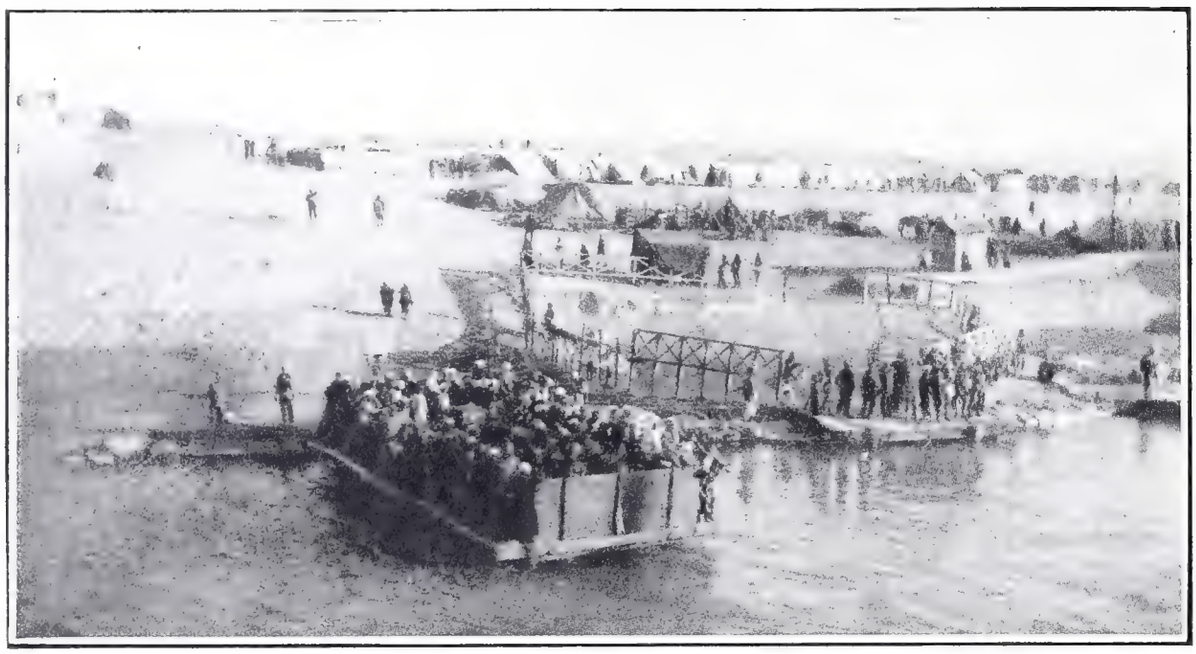
THE PROBLEM OF INVASION—PRECEDENTS IN HISTORY—THE SUEZ CANAL—GEOGRAPHICAL DESCRIPTION OF THE SINAI PENINSULA—TURKISH CHOICE OF ROUTE—MILITARY PREPARATIONS—DJEMAL PASHA IN COMMAND—EVENTS IN SYRIA—PREPARATIONS IN EGYPT—CAIRO AS A TRAINING GROUND—THE CANAL DEFENCES—NAVAL WORK ON THE COAST—OPERATIONS AT ALEXANDRETTA—THE TURKISH ADVANCE—DJEMAL'S PLAN OF ATTACK—ANALYSIS OF THE FIGHTING—DJEMAL'S FAILURE AND RETREAT—MINOR OPERATIONS—EVENTS IN EGYPT IN THE SPRING OF 1915.

THE Turco-German scheme for the invasion of Egypt had been frequently ridiculed by the less well-informed organs of the Allied Press. Had greater attention been paid to the history not only of the Ancients in whose days Assyrian and Persian armies crossed the Sinai Peninsula and successfully invaded the Nile Valley and Egyptian rulers repeatedly marched across the waste into Syria, but also of the Turkish and Saracen rulers of the Near East in the Middle Ages, it would have been realized that an army of moderate dimensions could cross the desert without undue risk.

At least two highly trained armies essayed the invasion of Egypt in the Middle Ages. The renowned Mongol general Kit-Bugha, one of Hulagu Khagan's ablest lieutenants, made the attempt. He was defeated and slain at Ain Jalut, near the present Turco-Egyptian border, by an army of Mamelukes commanded by the famous Mameluke leader, afterwards Sultan of Egypt, Beybars "Bundukdar" (the Arbalaster). Kit-Bugha failed, but the fact that the attempt was made by the Mongols, who were incomparably the most highly organized and trained warriors of the early Middle Ages, possessing a General Staff and an admirable Intelligence Department, proves that the ablest soldiers of that age regarded the passage of the desert as practicable by a well-equipped army. In 1517 Sultan Selim, the Grim of Turkey, at the head of a host almost as well organized as that of the Mongols, and provided with wheeled transport and artillery, successfully crossed the desert by the El Arish road and, after defeating the Mameluke cavalry at Ridanieh, led his disciplined Janissaries into Cairo.

At the end of the eighteenth and the beginning of the nineteenth centuries Napoleon and two Turkish generals crossed the desert. The former reached Acre, failed before British and Turkish stubbornness, and was able to withdraw with heavy, but considering all things, not excessive, loss into Egypt. A Turkish host was only stopped and overthrown at Heliopolis within a few miles of Cairo by Kléber in 1799. In 1801 another Ottoman army, co-operating with Abercrombie's gallant force, successfully crossed the desert. The hosts of Mehemet Ali and Ibrahim Pasha followed their example at a later date. When the Egyptians were finally compelled to evacuate Syria, Suleiman Pasha, fearful that his retreat by the coast road would be cut off from the sea, actually succeeded in withdrawing the remains of the Egyptian garrison of Syria into Egypt by the Akaba-Nakhl road.

It was believed in some quarters that the



A CAMP AND FERRY NEAR ISMAILIA.

construction of the Suez Canal had rendered it impossible for any army to contemplate the invasion of Egypt from the east pending the completion of a light railway or tram line across the desert, by which heavy artillery, capable of coping with the warships which assisted in the defence of the Canal, could be transported to, or sufficiently near to, the scene of action. It was also held that lack of water would seriously embarrass the attacking force. It had not been realized that the Turks, if indifferent organizers, were skilled in improvization, as became the citizens of an Empire which for generations had lived by shifts. British officers who, themselves detesting the Teuton, imagined that "Johnny Turk," with the exception of Enver and his friends, held him in equal loathing were unwilling to admit that the Turkish officer might conceivably render an unwilling but still complete obedience to the German prophet of efficiency. As for the water supply in the Sinai Peninsula, this, although never abundant, was a very varying quantity. There were years in which the El Arish road alone was practicable for an army; 1915 was not one of these. In November and December of 1914 rain fell in parts of the Sinai desert and the Turks were consequently able to make their attack with a certainty of finding the wells or rock pools full on most lines of march that they might select.

The Canal was, of course, a serious obstacle to any invading force. From the military point of view it was a huge unfordable ditch, deep enough and wide enough for the movement of the floating batteries of modern warships—an obstacle which could not be turned, and could only be destroyed as an obstacle either by the employment of enormous quantities of high explosives or by mines or heavy artillery capable of sinking warships therein and thus blocking a section of the channel.

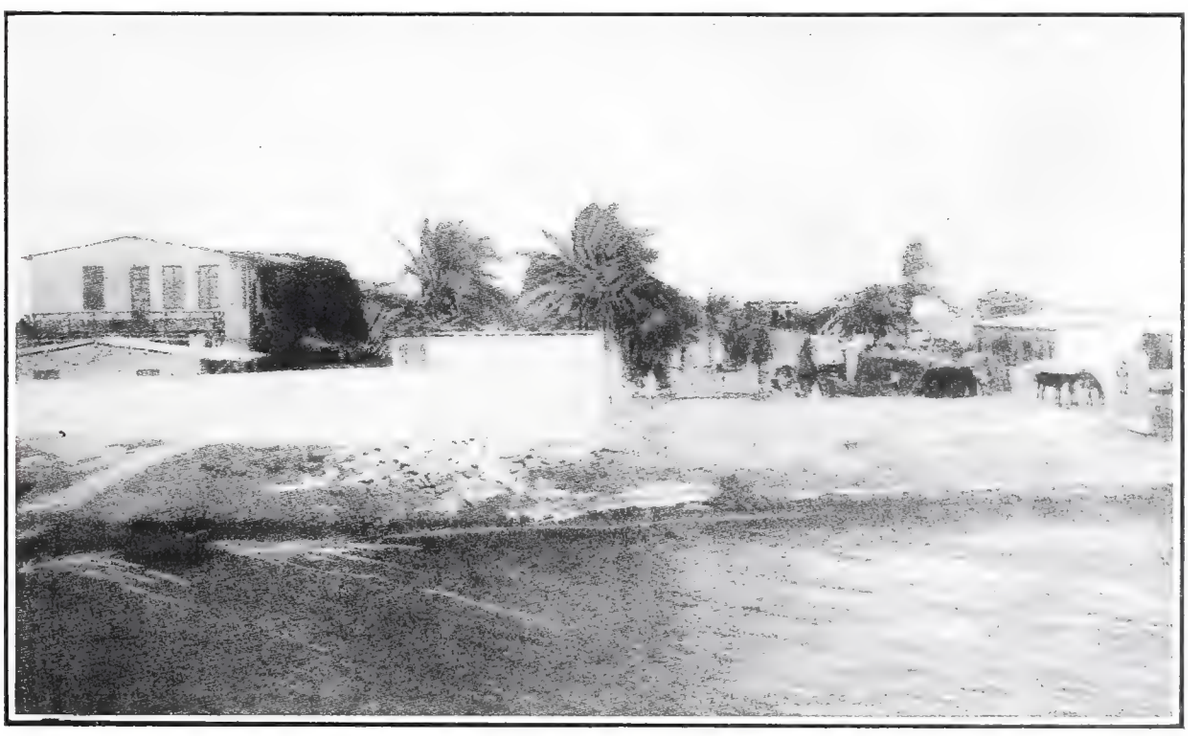
Even so the problem how to obtain a permanent footing on the western bank of the Canal remained to be solved. The Bitter, Ballah, Timsah and Menzaleh lakes greatly restricted the line which the defence required to hold, and a railway, connected at Ismailia with the excellent Egyptian system and running from Port Said to Suez on the western bank of the Canal, enabled the defenders to reinforce any threatened point with great rapidity. On the other hand there were certain disadvantages for the defenders. Lack of water rendered it difficult to push cavalry reconnaissances far into the desert. Save where fortified bridgeheads had been constructed, as at Kantara and Ismailia Ferry, the Canal was an obstacle to counter-attacks on the part of the defence, and the northern extremity of the position at Kantara lacked depth, having immediately behind it the swamps and pools of the southern extremity of Lake Menzaleh, and being thus exposed almost throughout to shell fire if the attacking force could bring its heavy guns within range. But if on the whole the Canal favoured the defence against any attempt at the invasion of the Delta, there was nothing in the Canal position to prevent an enterprising enemy provided with modern artillery

from establishing himself sufficiently near the eastern bank to impede navigation and thus to strike a blow at the eastern line of communications of the British Empire which would have considerable moral effect. The enemy's ability to establish himself and maintain himself in such a position depended not only on his fighting power, but on his ability to keep his army provided with food, water and ammunition, *i.e.*, on the nature of his communications with his base in Southern Palestine.

It will now be necessary to give some account of the Sinai Peninsula through which the would-be invaders of Egypt marched and through which their lines of communication ran.

A triangle of sand dune, rock and mountain, its apex pointed due south, its sides marked to east by the Akaba Gulf and the Turco-Egyptian frontier line delimited in 1906, to west by the Gulf of Suez and the Suez Canal, with the shore of the Mediterranean between Rafa and Port Said for its base, such is the Sinai. Geographically and orographically it is divided into three zones—the zone of the Drift sand, the Plateau zone, and the Mountain zone to the south. The first zone is narrowest near Rafa on the Turkish border. Thence it stretches westward along the coast, gradually expanding inland to a width of some 35 miles south of El Gels, and at Katia sweeps to the south between the Canal and the Plateau, its width varying from 20 to 35 miles between El Kantara and Ismailia, narrowing to from 10 to 12 miles due east of Suez town, and thence stretching southward—a ribbon of decreasing depth—along the eastern coast of the Gulf of Suez towards Tor. Its shape is thus roughly that of an L upside down, or a Greek Γ.

The softness of the surface is the principal feature of the region of the drift sand. Scattered about in it are "islands" of firmer ground: outcrops of rock, patches of hard gravel, small tracts where the "wadis"—torrents flowing from the plateau in spate perhaps once in five or ten years—have deposited layers of mud and gravel, which the sparse desert vegetation has bound. But in the main it is an infinitely fatiguing country of soft sand, sometimes blown by the wind into multitudinous dunes, where the way is easily lost, so like is each dune to its fellow. Between Bir-el-Mazar and Bir-el-Abd, on the road from El Arish to El Kantara, the dunes cover many score square miles, and again to the south and south-west of the palm groves of Katia. Between these dunes and the open waters of the Mediterranean, from a point immediately north of Bir-el-Mazar to a point some four miles north of Katia, stretches the Sabakat Bardowal, or Serbonian Bog of the Ancients, a long salt-water lagoon divided from the sea by a narrow sandy spit of land, with one or two small openings through which fishing boats can pass. West of this another region of salt lake and

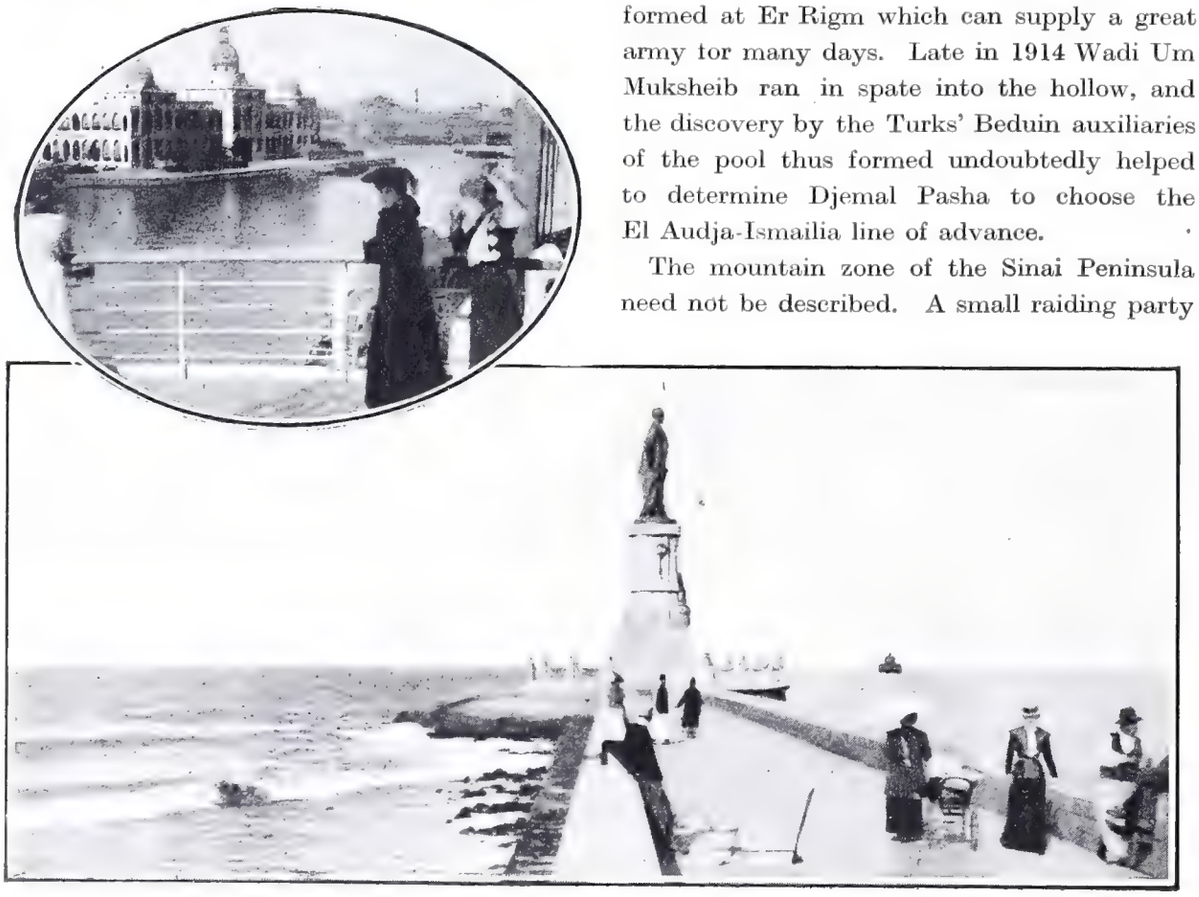


EL KANTARA ON THE SUEZ CANAL.

marsh intervenes between the sea and the sand till the Canal is reached. First there is the plain of Tineh or Pelusium, a bare expanse of mud and salty soil, with stagnant salt pools and great areas of quagmire in summer, in autumn and during the Nile flood largely submerged, save for a few mounds, the sites of ancient cities, by the rising of the salt waters of Lake Menzaleh. Then comes Lake Menzaleh, a great salt lagoon, expanding or contracting with the Nile flood, across the eastern bight of which passes the Canal with its raised banks, a double causeway. This northern portion of the drift sand area is not altogether unproductive.

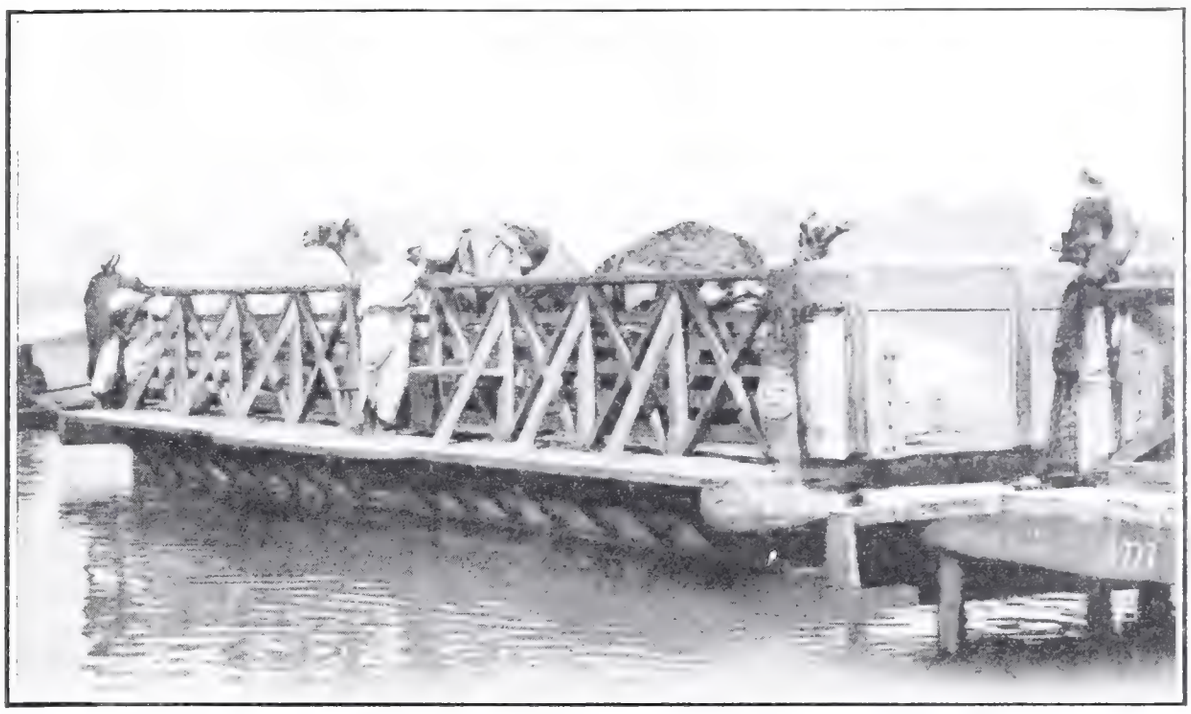
All along the coast are districts where water is obtainable by digging. In the neighbourhood of El Arish the wells are numerous enough to make a fair amount of cultivation possible, and the quality of the water is good. Here, too, the bed of the great Wadi El Arish, which ran twice in spate to the sea in the winter of 1914-1915, holds extensive pools after flood, and is always a safe place for well-sinking. Further west the quality of the water deteriorates. Round Bir-el-Abd, Katia and Bir-el-Duweidar are many smaller wells, and it is indeed easy to find water at from six to ten feet depth throughout most of the country just south of the Bardowal lagoon. There are at least 40,000 date palms in the oases in question. But the quality of the water is generally bad. Most of the water of this coast strip, save about the mouth of the Wadi El Arish, would seem to come either from the sea or from the lagoon, but the nature of the subsoil through which it filters varies greatly, with the result that, while El Arish is supplied with drinkable water from a limited number of wells, most of the more numerous wells of the Katia region yield a fluid which even thirsty Orientals find nauseous. Further south, along the stem of the "Gamma" or inverted L, wells are few and far between. Those that exist there probably derive their water from the plateau. Near the hill of Er Rigm, almost due east of the northern extremity of the Great Bitter Lake, is a hollow covered with impervious clay. This hollow is really a sort of sink, into which the Wadi Um Muksheib floods once in ten or fifteen years after a cloud-burst on the rocky Djebel Um Muksheib, a mountain mass on the edge of the plateau. A bar of hard sand forms a sort of dam at the northern extremity of the sink, and after the rare floods a great pool is formed at Er Rigm which can supply a great army for many days. Late in 1914 Wadi Um Muksheib ran in spate into the hollow, and the discovery by the Turks' Beduin auxiliaries of the pool thus formed undoubtedly helped to determine Djemal Pasha to choose the El Audja-Ismailia line of advance.

The mountain zone of the Sinai Peninsula need not be described. A small raiding party



ON THE SUEZ CANAL.

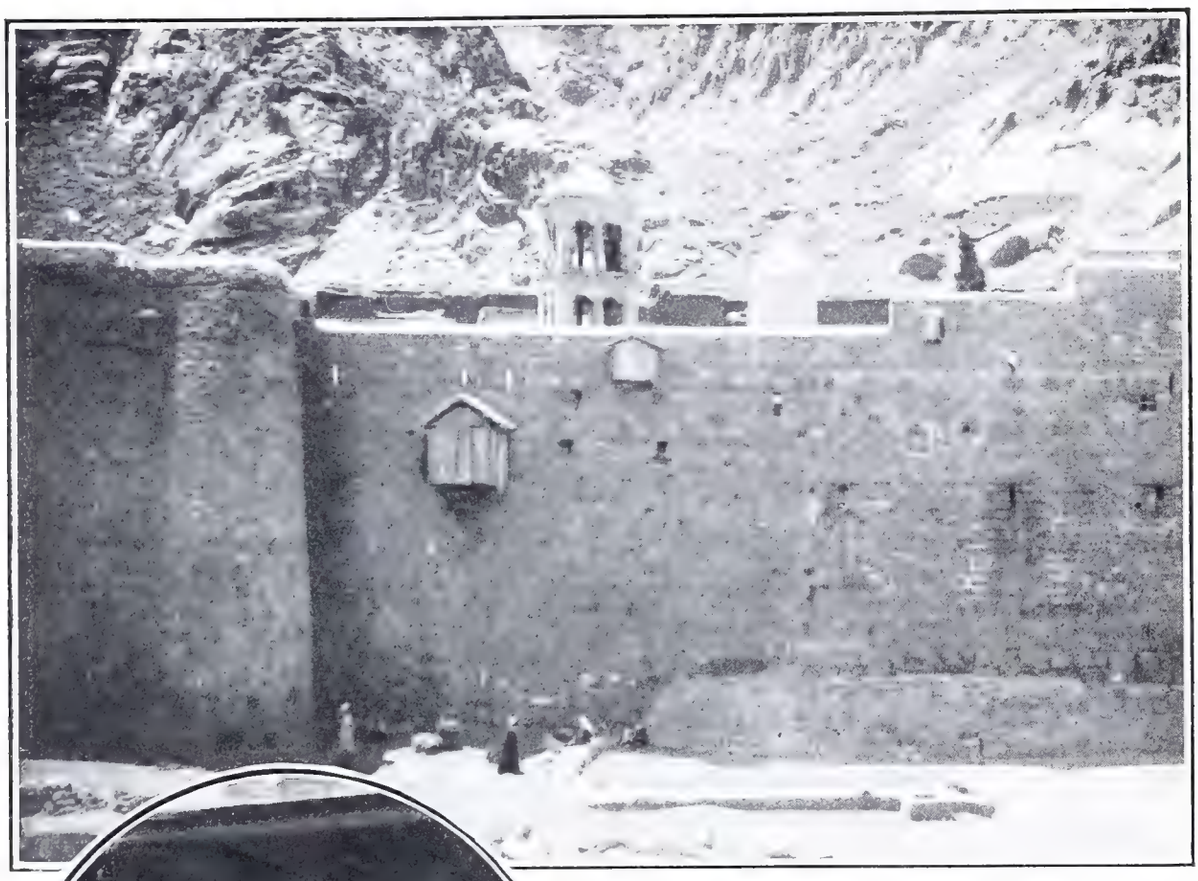
The entrance to the Canal, showing De Lesseps' Statue.
Inset: The office of the Suez Canal Shipping Company, Port Said.



TAKING CAMELS ACROSS EL KANTARA.

alone operated in it during the Canal campaign, and was destroyed as soon as it had been encouraged to venture out of the impassable labyrinth of peaks, gorges and cliffs that forms the southern third of the peninsula. No army could operate therein. For the rest it need only be said that it contains two of the very few permanently inhabited settlements in the Sinai, the Monastery of Mount Sinai and the Tor quarantine station for the pilgrims returning from the Holy places by the Red Sea route.

Most important from the military point of view of the three regions or zones into which the Sinai is divided is the zone of the Plateau. The greater part of this region is an open stony or gravelly expanse, sometimes flat, sometimes rolling country, barren beyond belief, and largely waterless, but less demoraiizing to tired infantrymen than the "soft desert." Round the curved edge of the plateau are mountain masses, isolated and steep hogs'-backs of rock, Djebel Lagama, Djebel Hellal, cloven in two by the Wadi El Arish, which here has cut an amazing canyon with walls of 700 feet of cliff, Djebel Maghara, where the Pharaohs mined turquoises, and further south, on the westward facing edge of the plateau, Djebel Um Muksheib and Djebel Er-Raha, with Djebel Yelleg further within the plateau to the east. There are a few rain pools in the gullies that score the sides of these isolated mountain masses, which rise from 2,000 to 3,000 feet above sea-level and from 1,000 to 1,500 feet above the average level of the plateau, and at their feet there are sometimes wells—Bir Hassana below Yelleg, Bir Hamma below Maghara, and the Roman or Byzantine cistern-well of Moia Harab under the western slope of Um Muksheib. But they have no military importance, for no troops could maintain themselves in their steep and barren fastnesses, often inaccessible to all but the occasional ibex of the Northern Sinai. In the Plateau zone is but one large patch of drift sand, a mass that lies between Maghara and Yelleg, but does not cover more than a few miles of the caravan route that lies between them. The rest of the plateau is to a large extent passable even by heavy wheeled traffic: automobiles could travel at speed over many miles of it, and artillery can be moved almost everywhere. It rises gradually from about 1,000 feet above sea-level at its northern edge to over 1,500 feet a few miles south of Fort Nakhl. In general the plateau is waterless, save for a few wells in the bed of the Wadi El Arish, a great torrent, nearly always dry, which rises south of Fort Nakhl and reaches the Mediterranean less than a mile east of El Arish. But it contains two comparatively well watered areas—the Kossaima district, where there are at least four large springs that can neither be blocked nor polluted, in the north-east, and Djebel Somar, about 25 miles south-east of Suez, in the south-west. The Kossaima region is sufficiently well watered from the springs to be cultivable in parts, as is some of the country



THE CONVENT AT MOUNT SINAI.

Showing the only means of ingress up to the British occupation of Egypt, a primitive lift being lowered from a "doorway" in the wall.

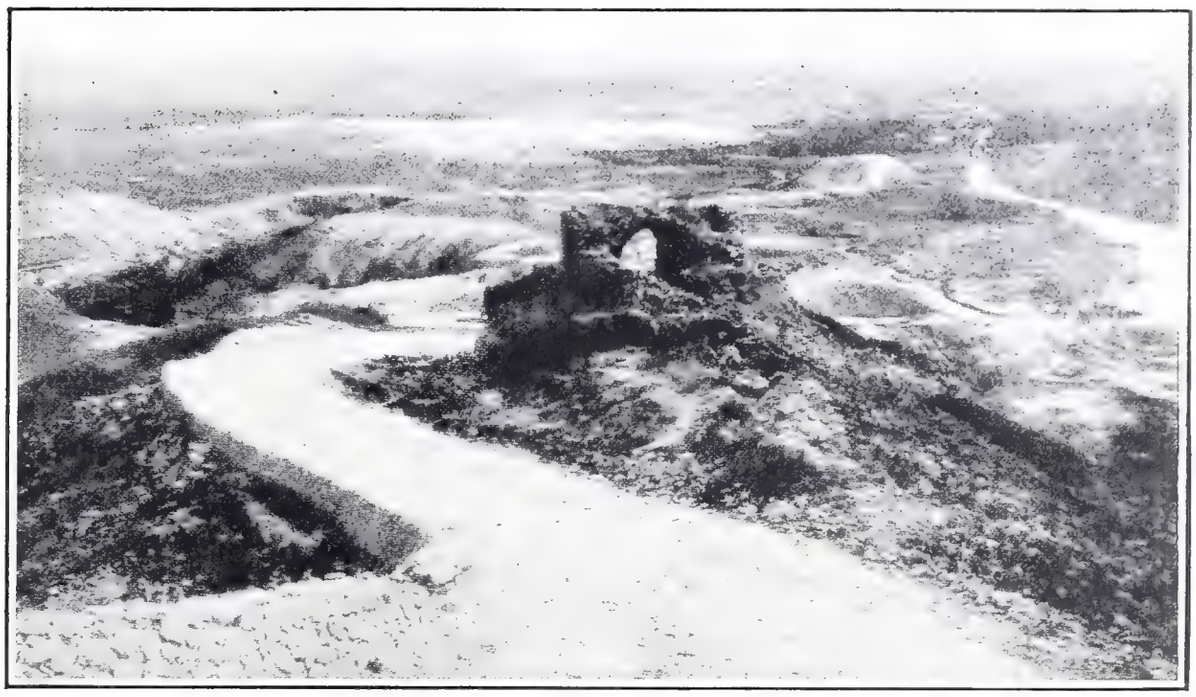
Inset: Interior of the Convent showing the "doorway" in the wall.

round the great cisterns of El Audja, ten miles to the north on the Turkish side of the border.

The population of the whole Sinai does not exceed 40,000 persons, a few settled inhabitants in and near El Arish, 400 or 500 Djebeliyeh Arabs, descendants probably of the slaves or tenants of the Sinai Monks in pre-Islamic times, who still live around the Monastery, and the rest Beduin of small and generally unimportant septs; Tiyaha in the south, Tarabîn, Azazma, and other sub-tribes of the Howeytat in the north, rather harmless people, living poorly as their ancestors lived by herding and hiring camels, paying some slight attention to the Egyptian authorities at El Arish and Fort Nakhl, the "capital" of the Sinai province, and very little attention indeed to their own sheikhs. From a military standpoint they were of small importance, except as possible secret agents or scouts.

Two main roads lead across the Sinai from the Turkish frontier. The best known is the old caravan road which leads from Rafa to El Kantara, a distance of 125 miles via El Arish, Bir-el-Mazar, Bir-el-Abd and Katia. The water supply on this route is, on the whole, good, the proximity of the telegraph line connecting Egypt and Syria makes it easy to follow at night, and it is perfectly passable for men and camels, but heavy wheeled transport could only be brought along this road by a commander who was ready to break many men's hearts and many beasts' backs. Along most of its course this road is protected against bombardment from the sea by the coastal dunes and by the Bardowal lagoon and its bar, but El Arish is exposed to naval attack, and troops making a detour to the south to avoid this threat would find themselves in an area of particularly soft sand-drift. For these reasons the Turks merely made a demonstration along this route.

The other great road across the Sinai is the Darb-el-Hadj, or Pilgrims' Road, exten-



The road which crosses the Plateau from Tabah to Suez.

The Ancient Fortress of Giziret El Faracun.

Mount Sinai and a view of the summit of Jebel Mousa.

A TRACKER,
Attached to the British Force in Egypt.

sively used by Egyptian pilgrims to the Moslem holy places before steamer traffic grew general in the Red Sea. This road leaves the head of the Gulf of Akaba from that town, and climbs up a very steep escarpment, a prolongation of the mountain zone of Southern Sinai towards the north, to over 2,000 feet above sea-level. Thence it descends to the plateau, which it crosses in a west-north-west direction by Bir Themed, Fort Nakhl, and the passes east of Suez till Suez is reached. The greater part of this route can be traversed even by heavy artillery, but it lacks water. Akaba is absolutely open to naval attack and the passes which troops advancing by this or parallel routes must thread before they reach the Suez plain are regular traps, narrow defiles where a handful of men could stop an army. Again, Akaba itself is three marches from Ma'an, the nearest station on the Hedjaz Railway. The road runs through an abomination of desolation with but one well, and the descent into the Ghor, the deep trench which runs north from Akaba to the Dead Sea, is steeper, higher and generally more difficult for a heavily equipped force than the ascent from the Ghor to the Sinai plateau. The Darb-el-Hadj was, therefore, judged unsuitable as a main line of attack, but as it has excellent lateral communications with Kossaima, and thus with El Audja and Bir-es-Saba (Beersheba), in Southern Palestine, the Turks soon decided to make a demonstration along it against the southern sector of the Canal defences.

The unsuitability of these two roads for the main advance and favourable news concerning the water supply on the road between Kossaima and Ismailia ultimately led Djemal Pasha, or his Chief of Staff, the Bavarian Colonel Kress von Kressenstein, to adopt this line for the main attack. Further details concerning this road will be given when the enemy's march on the Canal is described.

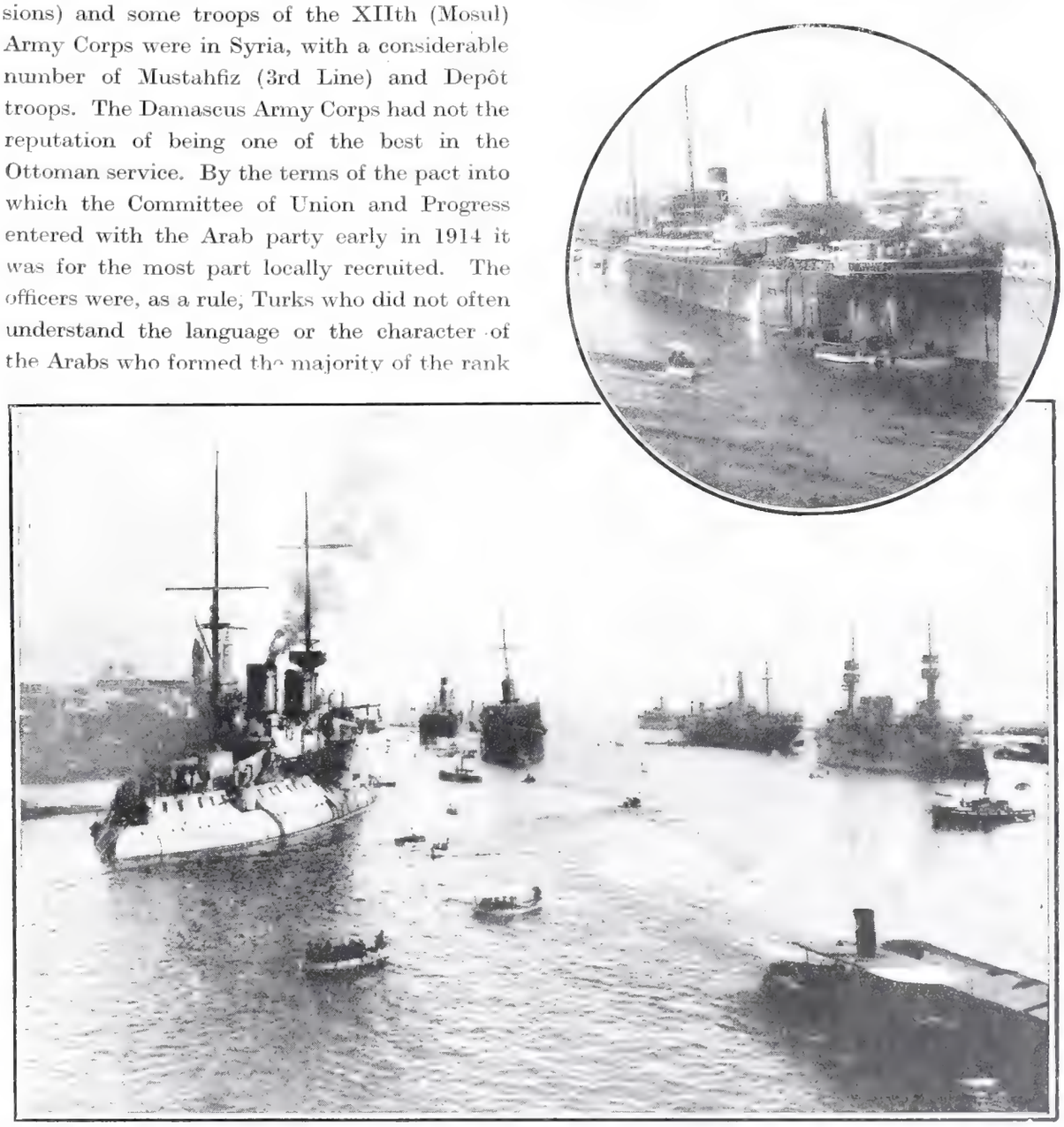
Meanwhile it may be noted that the Turks for some time played with the scheme of constructing a railway from Ma'an to Nakhl, crossing the Ghor at a point some distance north of Akaba. Unfortunately for their enemies, the Turks consulted the Austrian archæologist and geographer, Dr. Alois Musil, who scornfully disposed of a scheme for building a railway down 3,000 feet of cliff and sand-slides and up 2,000 feet of screes and gullies on the western side of the Ghor.

Finally it was decided to prolong the Haifa Damascus line into the Sinai by way of Nablus and Jerusalem. The French railway from Damascus to Muzeirib in the Hauran was pulled up, and the rails were transported to Afulé station, whence the Sinai railway was to start. With rails taken from sidings or repairing shops on the Syrian lines, and with a couple of German shiploads which had been landed by fugitive German steamers just after the outbreak of the Great War, the Turks hoped to reach Kossaima. By the end of May, 1915, all work had ceased and the line had reached a point about six miles south of the Jaffa-Jerusalem Railway at Ludd (Lydda). Its abandonment was due to the seriousness of the situation at the Dardanelles, and also to the depredations of the Beduin carriers and workmen, who stole an extraordinarily large proportion of the bolts and rivets required by the construction parties. Even if work had been commenced at the same time as the Turkish general mobilization, the line could not possibly have reached the neighbourhood of the frontier

by the early spring of 1915, when, for climatic reasons and on account of the impending failure of the winter rain supply in the desert, it was necessary to advance without delay or else to postpone the "invasion of Egypt" till the completion of the railway or the next winter rains.

When war broke out, the Turks had had three months in which to complete their mobilization. Difficulties of transport and lack of equipment, which was only gradually supplied from Austria and Germany, prevented them from taking an immediate offensive against Egypt. In October the VIIIth (Damascus) Army Corps (23rd, 25th and 27th Divisions) and some troops of the XIIth (Mosul) Army Corps were in Syria, with a considerable number of Mustahfiz (3rd Line) and Depôt troops. The Damascus Army Corps had not the reputation of being one of the best in the Ottoman service. By the terms of the pact into which the Committee of Union and Progress entered with the Arab party early in 1914 it was for the most part locally recruited. The officers were, as a rule, Turks who did not often understand the language or the character of the Arabs who formed the majority of the rank and file. After mobilization orders were issued the pact between Turks and Arabs, like the Armenian reform scheme, was thrown overboard, and a considerable number of Arabs were drafted into Anatolian Army Corps, their places being taken by Turks and a few Kurds. The Mosul men do not appear to have proved satisfactory. Many deserted and, by the beginning of November, the Turks had decided to send more reliable troops to Syria in their place. They were then sent back to the East, and at a later period came into action against the British forces in Southern Mesopotamia.

At the end of November and early in December a large Turkish army poured through the Cilician Gates into the plain of Adana. It was composed of troops from the IIIrd (Rodosto),



ON THE SUEZ CANAL.

French men-of-war and an Australian troopship at Port Said. Inset: An Australian troopship.

GENDARMES (SYRIAN MOSLEM)
With headdress for desert wear.

IVth (Smyrna), and Vth (Angora) Army Corps. A full division of each Army Corps (the 8th of the IIIrd, the 10th of the IVth, and the 14th of the Vth Corps) were there, and a composite (Muretteb) division of the Ist Army Corps followed later. But only the IVth Corps troops moved southwards into Central Syria. The 8th remained for some time in Cilicia. The 14th Division seems to have pushed eastwards towards the Caucasian theatre, arriving, after many weeks' marching, at Erzrum to find the army it had been sent to reinforce hopelessly beaten at Sarykamish and Karaurgan. The composite division of the Ist eventually arrived in Mesopotamia. With the 10th Division came two or three batteries of heavy guns, a pontoon train, a considerable force of field artillery and great quantities of stores and munitions of war. The 10th Division bore a good reputation as a well-trained and well-disciplined force. It was commanded by a German officer—von Trommer Pasha. Shortly before it arrived in Syria the Commander of the "Fourth Army," to which the attack on Egypt was entrusted, arrived at Damascus. This was Djemal Pasha, one of the leading personalities of the new régime in Turkey, who had resigned the portfolio of Minister of Marine to take the command of the "Army of Egypt," and so, it was more than whispered, to escape from the advice hourly tendered to the Ottoman Admiralty by its German advisers.

Djemal had been one of the leading members of the Committee of Union and Progress in its Macedonian days, when he was a major on the Turkish General Staff. Under the new régime he held the posts of Vali of Adana and of Baghdad, resigning the latter when the opponents of the Committee temporarily returned to power. When the Balkan War broke out he was offered and accepted the command of the Konia Redif Division, and fought sturdily, if unsuccessfully, under Mahmud Mukhtar at Soghudjak Deré and Bunar Hissar. He then fell sick of cholera, recovered, and was the first of the Young Turk conspirators to enter the Sublime Porte when Kiamil Pasha's Government was overthrown and Nazim Pasha slain by the followers of Talaat and Enver. In reward for his services he was appointed first Commander of the Constantinople Army Corps, in which capacity he rendered great services to his party during the uneasy months that passed between the *coup d'état* and the murder of Mahmud Shevket Pasha. After the recapture of Adrianople he became Minister of Public Works and, early in 1914, Minister of Marine. A convinced "Pan-Ottoman," dreaming of the day when Turkey would become a Sea-Power again, he made no secret of his Irredentist aspirations. "You Europeans," said he one day to the Italian Ambassador, "may consider the questions of Tunis, Tripoli and Egypt as settled. We do not think so, and when one day we raise these questions, we shall do so with three hundred million Moslems at our back." No less indiscreet was his language to the French Ambassador at Constantinople early in October, when the Ottoman troops were already beginning to move towards various

strategical points on the Turco-Egyptian frontier. "I cannot understand the attitude of your English colleague," said Djemal angrily. "Recently I suggested that we should open negotiations for the evacuation of Egypt by the British garrison; after the war, of course. Just imagine; he didn't even answer me" ("Figurez vous, il ne m'a pas même répondu"). Sir Louis Mallet's refusal to discuss the evacuation of Egypt with Djemal was the last straw. Baron von Wangenheim, German Ambassador at Constantinople, had already succeeded in diverting the attention of the Minister of Marine from his fleet to the "sad plight of our martyred Moslem brothers," as Turkish newspapers described the condition of the Egyptians, and Djemal, already bitterly anti-British, on account of the embargo laid on the Sultan Osman and the Reshadieh by our Government, was henceforth hypnotised by the "Kurassier-Diplomat." Egypt became an obsession with him, as was King Charles's head to Mr. Dick, and Enver was no doubt delighted. He and Djemal had quarrelled more than once, and when the Turkish Napoleon had made war on the Entente Powers Djemal would be better in a distant province.

So much for the Turkish Commander-in-Chief in Syria. Though a courageous and energetic man, choosing energetic subordinates, he had a large share of what Robert Louis Stevenson called "blooming gaseous folly," in his composition. The details of his plan of campaign, if not the plan itself, were worked out by his Chief of Staff, the Bavarian Colonel Kress von Kressenstein. The organization of the Ottoman transport was confided to Roshan Bey, an able Albanian officer, who was largely responsible for the success of the march across the desert.

By the new year four Nizam (First Line) or Muretteb (Composite) divisions and the equivalent of nearly two divisions composed for the most part of Second Line and Depôt troops were stationed in Central and Southern Syria, between ten and fifteen thousand Beduin irregulars had been collected, and part of the Hedjaz Division had been railed up from Medina and sent to Fort Nakhl. The artillery of the Fourth, or Syrian, Army (as Djemal's force was officially named) had been greatly strengthened, large quantities of stores and transport had been requisitioned, and Turkish scouting parties had acquired a considerable amount of information as to the roads and water supply of the Sinai. But the Turkish leaders themselves realised that, imposing as their military strength in Syria appeared to be, they would be compelled to leave a large proportion of the troops they had mobilized and equipped behind them, not only to protect their communications against attack from the sea but against Arab disaffection. The Druses of the Hauran, the settled Arabs of Kerak, who had risen in revolt against the Turks in 1910, and some of the great Beduin clans, required to be vigilantly watched by the authorities. The autonomous province of Mount Lebanon,

TURKISH CONVOY IN SYRIA.

inhabited by Druses who liked the Turk but little and Christians of various sects who thoroughly detested him, was a stronghold of French and British influence, and owing to its physical conformation required to be masked or occupied by a fairly large force. Among the majority of the Moslems of Syria Turkish rule was tolerated, but there was little liking for the Turk, and Young Turk experiments in "Turcization"—modelled on those of Magyar and Prussian—had the worst possible effect on the loyalty of the educated Arabs. There was no avowedly anti-Turk party among them that could be compared to the Macedonian "Internal Organization" or the Armenian "Dashtnak" and "Hintchak" Societies in Hamidian days. The Parliamentary elections were regularly "made" by the Committee of Union and Progress; Turkish Ministers and politicians had entered into a pact with more or less representative Syrian Moslems for the removal of specific grievances; but throughout the troubled period that intervened between the Balkan War and Turkey's entry into the Great War as the ally of the Central Powers the relations between Arab and Turk were strained. Religion, as strong a force in Syria as in Egypt, to some extent eased the strain, but it could not prevent the eloquent "meridional" commercially-minded Arab from growing more and more restive under the domination of the Osmanli, whom he feared but in his heart of hearts despised as a slow-witted and "pre-economic" man.

Both the Turks and their German allies had been disappointed by the coldness with which the proclamation of a Holy War was received by the majority of the Moslems of Syria. In vain did agents or creatures of the Committee of Union and Progress, such as Sheikh Shawish and the Druse Emir Shekib Arslan, preach the "Djihad." They obtained a few recruits among the town rabble of Beirut, Jaffa, Nablus, and other cities where there was a somewhat fanatical element, but they failed, as a rule, to arouse the enthusiasm of the educated classes and of the depressed peasantry, while the Ulema, whose whole-hearted support was necessary if Moslem fervour was to be kindled into flame, pertinently asked what sort of a Djihad was this in which the leading Moslem sovereign was the ally of two infidel Powers. In vain did Turkish officials and officers attempt to excite the fanaticism of the masses against enemy subjects and native Christians. The wholesale requisitions in which the military

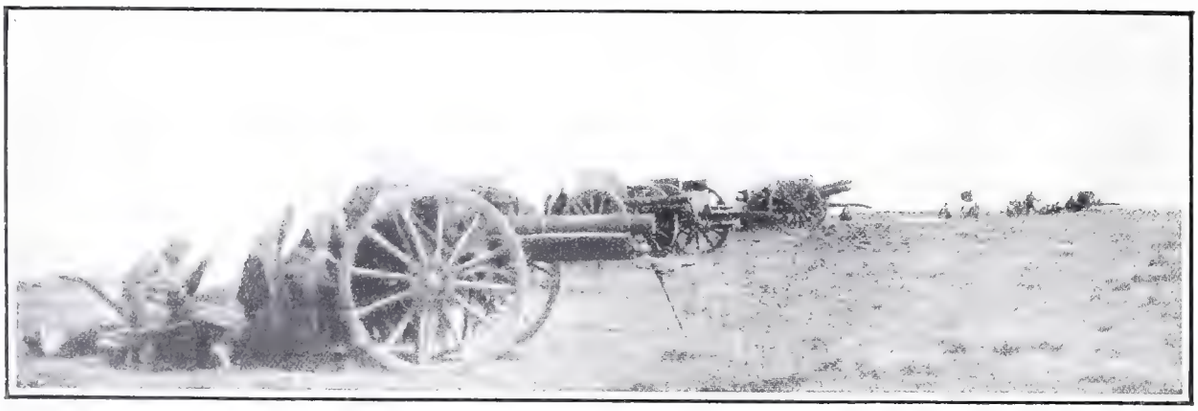
RECRUITING MEETING AT THE JAFFA MARKET.

IN COMMAND OF THE TURKISH ARMY IN EGYPT.

General Djemal Pasha (on right) taking leave of the Turkish troops before their departure for the desert. Inset: General Djemal Pasha and his German Aide-de-Camp, Colonel von Trommer.

indulged, the imposition of the Corvée (forced labour on the roads) on the peasantry and the levying of "benevolences" or "forced voluntary subscriptions" on all persons who were known or believed to have money, involved Moslems and non-Moslems in common distress and deepened the dislike of the overbearing Turk. Vain, too, were the theatrical attempts of German and Austro-Hungarian Consuls and other agents to prove themselves more Moslem than the Moslems. When Herr Lange, a German who had till recently been Belgian Consul at Haifa, made the infamous suggestion that English and French women left in Syria should be distributed among the Arabs, no Arab supported him, and an attempt by Dr. Hartegg to preach the Holy War and raise recruits at Nablus was snubbed by the leading Moslem family in that town.

The powerful Beduin clans of the Eastern Desert, on whom the Turks had counted, proved a broken reed. Only the Tarabin, the Azazma, and some of the sub-tribes of the Howeytat supplied irregular levies. The Ruala and Aneiza promised to defend Syria were the country invaded, but found a hundred good reasons against participating in the Egyptian expedition. The Beni-Sukhur Sheikhs and their followers quarrelled with the Turks over camel hire, pillaged the arms depôt at Beersheba, and took to the Eastern Desert, killing some soldiers who attempted to bar their passage of the Hedjaz Railway at Amman. The autonomous province of Mount Lebanon was occupied towards the end of November by Turkish troops. One hundred soldiers, still in summer equipment, perished in a blizzard in



A TURKISH BATTERY NEAR THE SUEZ CANAL.

the mountains. Some villages were disarmed, several notables sent to Damascus as hostages, and the Governor, Kuyumdjian Effendi, was instructed to take his orders from the Ottoman Commander in Syria. The Lebanese, in spite of their pro-British and pro-French sympathies, wisely refrained from any revolutionary movement, which would have exposed them to the sternest repressive measures.

The Ottoman soldiers, mostly Arabs, on their side behaved well. Subjects of the Entente Powers residing in Syria suffered much from the thievishness or from the suspicions of Turkish officers and officials. For the present it need only be said that, while few acts of personal violence were recorded during the period covered by this chapter, schools, churches, monasteries and private houses abandoned by their owners were seized with their contents by the military authorities, enemy subjects of military age who failed to leave in time were interned, and the clergy and missionaries, more especially the French and Russians, either expelled or exiled, with the minimum of humanity, to the interior. Djemal Pasha, during these seizures of property and expulsions, informed all and sundry that no missionaries would be permitted to return to Palestine after the war. The Russian Jews, who formed the majority of the Zionist colonists in Palestine, were given the alternative of renouncing their nationality or leaving the country. To their credit many accepted exile and made their way by sea to Egypt in a state of dire destitution. Some of these unfortunate people were robbed and maltreated by the Turkish gendarmes before they left Palestine. This change of policy on the part of the Committee Government, which had at times shown strongly pro-Jewish and pro-Zionist leanings, would appear to have been inspired by the belief that the Arabs, who feared the economic conquest of Palestine by the Jews, would appreciate this bid for their support. But none of these efforts to excite fanatical or anti-foreign feeling aroused any general enthusiasm in favour of the war among the Moslems of Syria.

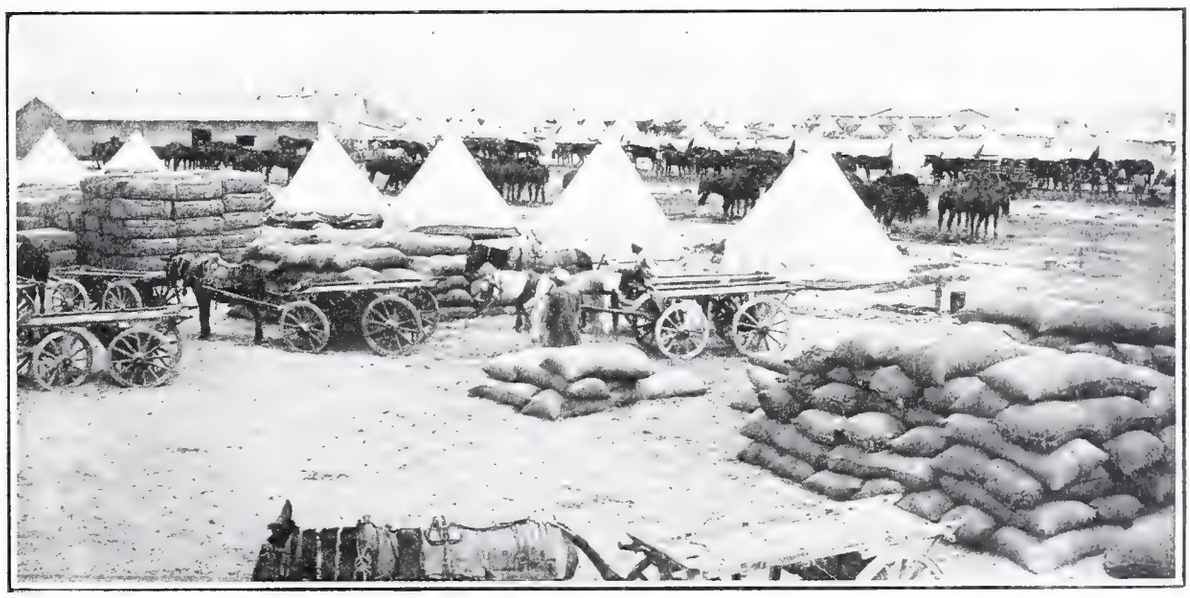
By the middle of December the British garrison in Egypt had been brought up to a strength that would have enabled it to repel a far more formidable attack than that which the Turks ultimately directed against the Canal position. It was composed of the Australasian Army Corps of Australians and New Zealanders, the East Lancashire Territorial Division with most of their Divisional troops, a Mounted Brigade of Yeomanry, and a strong Indian force, including a number of Imperial Service troops, mostly mounted, and many excellent Regular battalions, and of the strength of a powerful Army Corps. Of these troops part of the Indian force were excellent. The Territorials and Yeomanry trained on very rapidly. The Australians, and to a less extent the New Zealanders, did not shake down very kindly to military discipline at first. For this there were many reasons, notably the lack of professional or, at all events, trained officers among them, the extreme individualism of some of the men, and, in some cases, errors in recruiting by which men physically or morally unfit to belong to a Volunteer force had been allowed to enlist. But, once bad characters and inefficients had been weeded out and the officers had got some grip on their men, the efficiency of the Australasian Army Corps improved rapidly. During the campaign on the Canal few of its units were actually engaged; it was not till the great fight on the Six Beaches of the Gallipoli Peninsula that it had the chance of displaying to an astonished enemy the wild valour and élan and the remarkable

individual initiative and intelligence of the Colonial soldier.

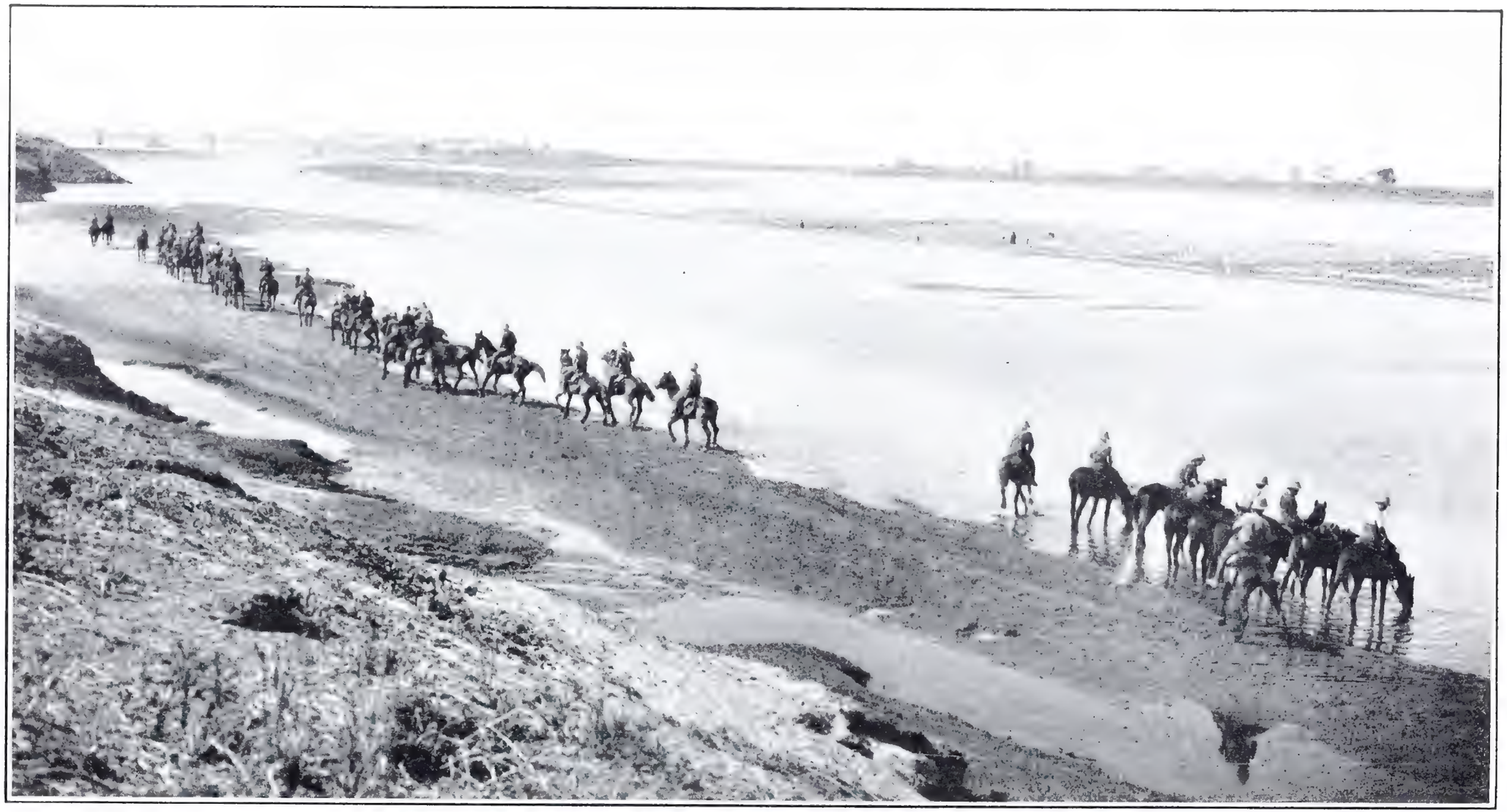
At the beginning of 1915 the defence of the Canal was left to the Indian troops and the Fleet; Territorials, Yeomanry and Australasians were undergoing intensive training at Alexandria, and still more round Cairo, where the desert in the spring and winter months proved a magnificent and unlimited training ground for all arms. At Mena House, below the Pyramids, at Heliopolis, to the east of Cairo, and at Meadi, on the way to Helouan in the south, great camps were formed for the newcomers, and the large barracks formerly occupied by the Army of Occupation now housed Yeomanry and Territorials. Thanks to the very general employment of inoculation, typhoid caused few fatalities among the troops: the Australasians arrived with influenza, which broke out on several of their troopships shortly after starting, and lost a certain number of men from pneumonia, while "sand colic," an intestinal disorder apparently caused by absorbing sand, an unavoidable ingredient in one's food in windy weather in the desert, gave some trouble. On the whole, however, the health of the men was very fair. The horses of the Colonial troops arrived in admirable condition. There was a tendency during the South African War to regard the Australasian as a bad horsemaster, but nothing could have been better than the condition of their beasts after their arrival in Egypt and throughout their stay in the country.

The one drawback to Cairo as a training centre is the fact that few towns contain a larger parasitic population, both European and native. Drinking dens and houses of ill-fame are all too common, and till recent years the Capitulations prevented the Anglo-Egyptian authorities from taking sufficiently drastic steps against the vendor of poisonous brewages, misnamed "beer" or "spirits," or the keeper of disorderly houses. Arriving with plenty of money in their pockets, for they at first received all of their 6s. a day, in a great city, some of the Australasians were decidedly "fresh" at the beginning of their stay. Military Ordinances for the closing of certain houses and the punishment of individuals selling adulterated liquor were rendered necessary, and had the Australian military police been up to their work there would have been little cause for complaint from the very beginning. As it was, it took some time to get some of the Colonial troops in hand. But it would be unfair to regard an undisciplined and small minority as in any sense representative of the Australasian soldiers. The great majority behaved well, and gave the European and native population no cause for complaint whatever, while their magnificent physique was a constant source of admiration. So also was their lavishness.

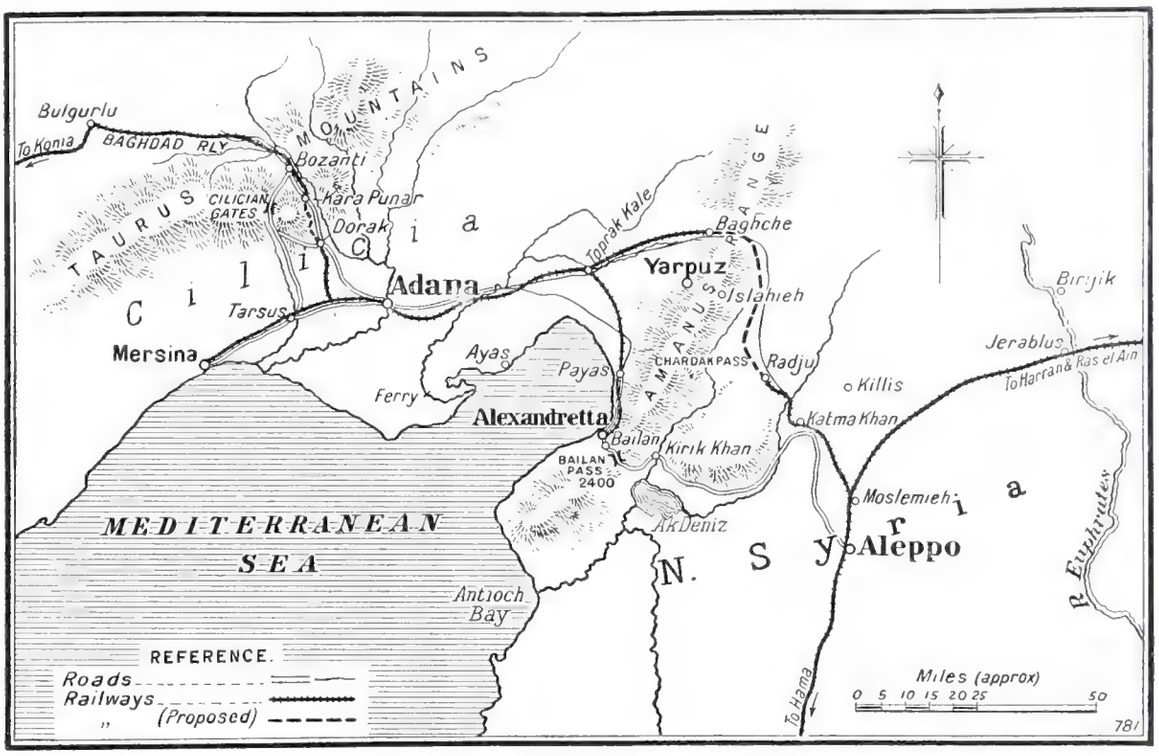
During the autumn and winter the Suez Canal position was thoroughly strengthened. Most of the devices of modern field fortification were employed in its defence: military and naval patrols watched vigilantly for any attempt on the part of enemy agents to approach the entrenchments or to drop explosives



AN AUSTRALIAN CAMP,
Showing the desert and Mokathun Hills in the distance.



THE AUCKLAND MOUNTED RIFLES,
Taking their horses for a swim in the Nile at the Barragh.



CILICIA AND NORTHERN SYRIA.

into the Canal and the different sections of the defensive line were thoroughly linked up by telegraph and telephone. Without going into details of the British defences it may be said that they consisted of a series of fortified "bridge-heads" on the Eastern Bank of the Canal covered by entrenched positions on the Western Bank. Most important of the fortified bridge-heads were El Kantara, El Ferdan and Ismailia Ferry in the northern section, Tussum and Serapeum in the centre, and Shaluf and Kubri in the southern. The ground to north and south of El Kantara had been flooded by letting the Canal flow for a while into the Menzaleh and Ballah Lakes, and the front on which an enemy could attack this most important post was thus greatly limited.

War vessels were detailed to hold the Timsah and Bitter Lakes in case of necessity, but till the enemy was known to be advancing most of the more important units of the Allied squadrons in the Levant and Red Sea were employed on the Syrian and Arabian coasts. Their work must now be described.

The declaration of war against Turkey was followed by a concentration of war vessels, mainly cruisers and torpedo-craft, in the Levant and Red Sea for the purpose of watching the coasts of Southern Asia Minor, Syria and Turkish Arabia. The action taken by H.M. cruiser Minerva and the destroyers Savage and Scourge in the Gulf of Akaba until the new year has already been described.*

On the Syrian coast the object of the operations of the Allied war vessels was double—first, to prevent mine-laying off the enemies' ports and to capture coasters conveying war material from one port to another; secondly, to observe and when possible impede such hostile movements, especially in connection with the projected invasion of Egypt, as might take place within range of the guns of war vessels or within the radius of the French hydroplanes supplied for this work by our Allies. The share of the Allied warships in the defence of the Suez Canal is described later.

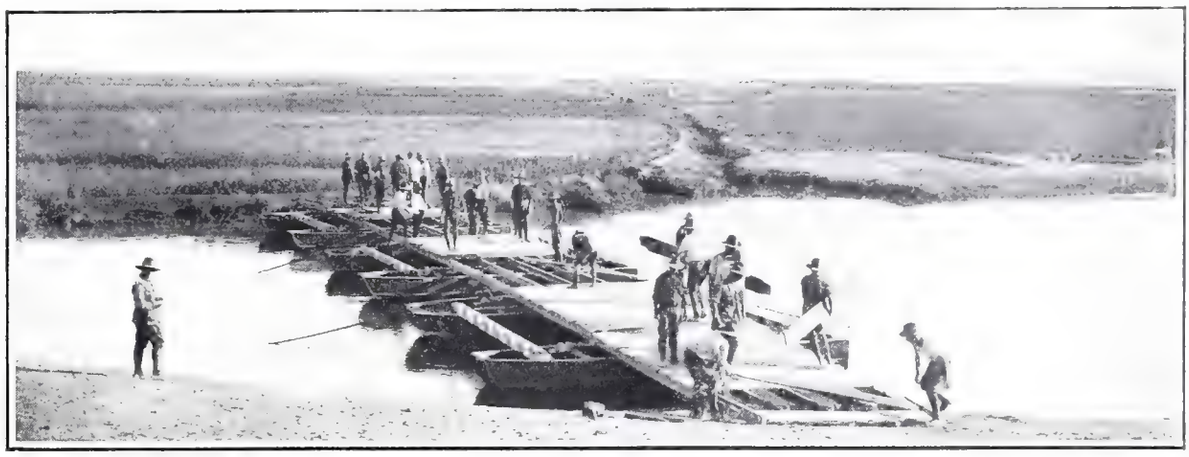
The one point at which the communications between the Turkish forces and Constantinople could be effectively attacked by a purely naval force was Alexandretta and the shore between the little town and the village of Payaz further north. To understand the importance of this stretch of coast reference must be made to the map on this page of the railways and chief roads of Cilicia and Northern Syria. It will be seen that the gap in the Baghdad Railway between Kara-punar and Dorak, where three tunnels had been commenced before May, 1914, is no serious obstacle to the transport of troops from the north, since two carriage roads—the old

* Vol. III., p. 318.

Government road which traverses the Cilician Gates and a good new road admirably built by the Baghdad Railway Company's engineers, which follows the unfinished mountain section of the railway pretty closely—cross the Taurus range and meet the railway at Tarsus and Dorak in Cilicia. These roads are occasionally blocked by bad weather, but seldom for more than a few days during the winter. East of Adana the railway runs to Toprak Kalé, where it bifurcates. One branch runs to the foot of the Amanus Mountains at Baghche. From Baghche to Radju, whence a finished section of railway runs to Moslemieh and Aleppo, is perhaps the most difficult section of the Baghdad line. A tunnel is being made at Baghche, but on the east side of the range construction is difficult till Radju is reached. A rough and bad road crosses the Amanus above Baghche, and runs thence towards the south-east through difficult country towards Killis and Aleppo. In summer wheeled transport can be got over the Amanus ranges without excessive difficulty, but in winter the road is most trying and is frequently blocked by snow or slush. Another road from Adana passes round the eastern shore of the Gulf of Alexandretta, by way of Payas and Alexandretta town, crosses the Amanus by the easy Bailan Pass, and thence is continued to Aleppo. This is a good road with few difficulties for heavy traffic, but, like the Payas-Alexandretta section of the Toprak-Kalé-Alexandretta branch railway, which it crosses and recrosses, it is absolutely exposed between Payas and Alexandretta to naval bombardment. There it runs between the beach and steep hills or cliffs; no forts protect it, and any formed bodies of troops or transport trains daring to traverse it under the guns of a warship would be speedily destroyed. Behind Alexandretta it winds up to the summit of the Bailan Pass, in full view of the sea and an admirable target against the hillsides.

AUSTRALIANS IN THE TRENCHES.

It will thus be seen that the Turks, if they wished to reinforce their Syrian Army, had either to risk great losses from naval gunfire between Payas and Alexandretta, or to move their men, stores, and guns by a difficult mountain route over the Amanus from Baghche to Radju, a route which bad weather might at any time block for two or three weeks. At first they risked the sea-road, and risked it with success. The 10th Division, if not others of the troops who crossed the Taurus late in November, marched or were railed, with guns, pontoons, explosives, and baggage to Alexandretta. Owing perhaps to a failure to realize the strategic importance of this stretch of coast, perhaps to the lack of coordination between the higher naval and higher military command at home which was manifested in the earlier stages of the Dardanelles operations, there was no Allied warship in the Gulf of Alexandretta as the trains came down from the north. A single cruiser would certainly have inflicted heavy losses on the troops who afterwards

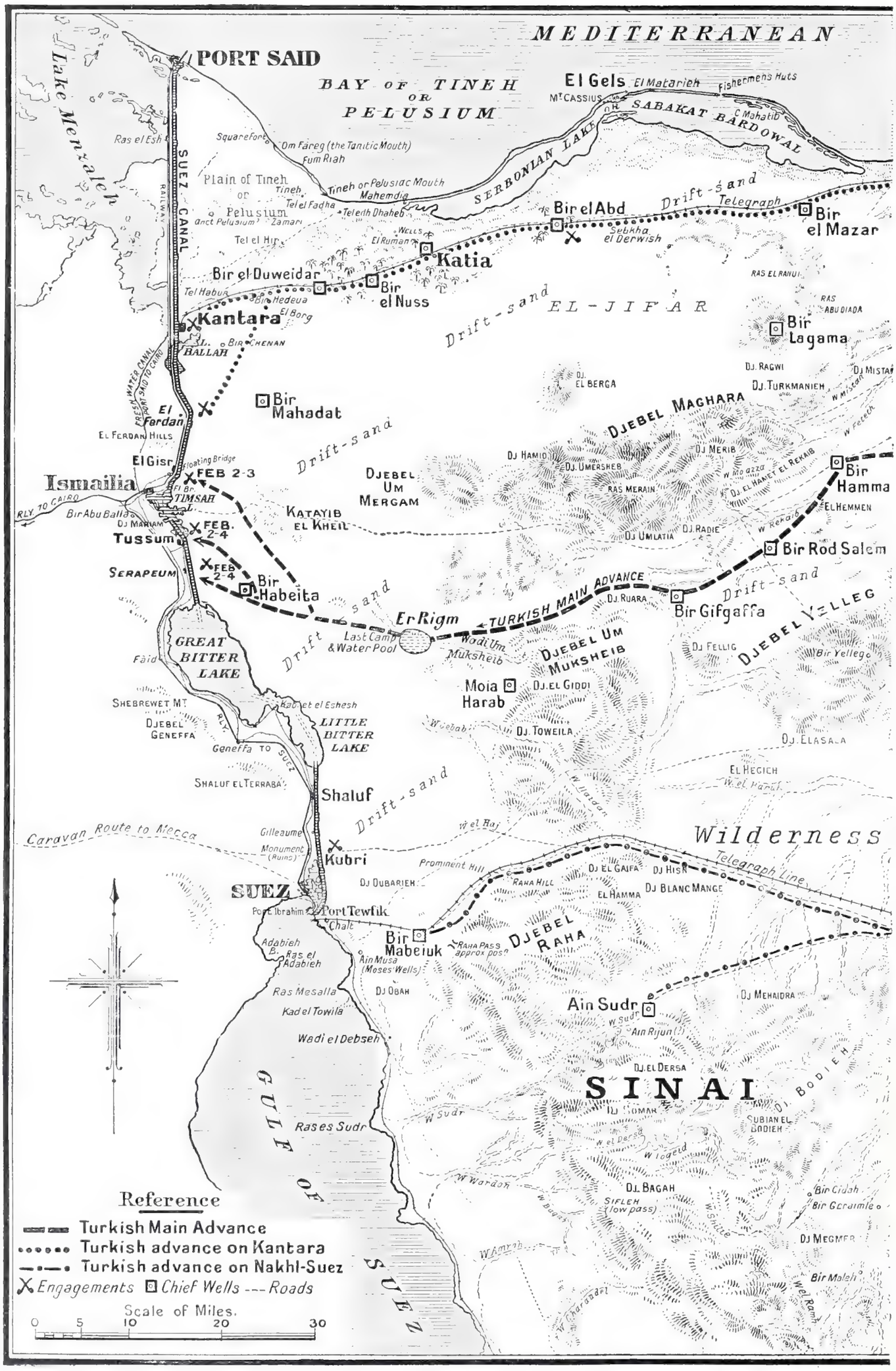


BRIDGE BUILDING BY THE AUSTRALIANS.
Building a pontoon bridge across the Irrigation Canal.

attacked the Canal, and might have destroyed most of their artillery and pontoons. But the chance was lost, and it was not till a week after the main body of Djemal's army had crossed the Bailan Pass with guns and equipment intact that H.M.S. Doris appeared off Alexandretta.

In spite of the value of Alexandretta to the German Government and its capitalist allies who hoped to exploit and control the Turkish Empire in Asia by means of the Baghdad Railway, little had been done to protect the town against naval attack. A merchantman, afterwards destroyed by the Doris's crew, had been sunk in the bay; half a dozen mines are said to have been laid down near Ayas. Some trenches were constructed along the shore and on the Bailan Pass. But the failure to take any effective measures to render it difficult for hostile warships to land parties and attack the railway is difficult to explain.

On December 15 the British protected cruiser Doris left Askalon, where she had been engaged in some minor operations. On the 17th she appeared off Alexandretta and bombarded and destroyed four bridges on the road and railway leading from Alexandretta to Payas. Her captain presented an ultimatum to the Turkish commandant at Alexandretta ordering the surrender or destruction of the railway station, wharf, and warlike stores in the town. Failing this he threatened to bombard Alexandretta, a garrison town within the war area. On the 18th the Doris's guns destroyed a train laden with camels for the Syrian army, and a landing party dispersed some Turkish troops near the Dort-Yol railway bridge and blew the bridge up with dynamite, losing one man wounded during the operation. The Turks at Alexandretta, having taken no notice of the first ultimatum, a second ultimatum was served on their commander demanding the surrender of all war material in the town, failing which the Doris would be obliged to have recourse to a bombardment. This ultimatum elicited an angry telegraphic message from Djemal Pasha at Damascus, who threatened to execute Allied subjects interned at that city should any Ottoman non-combatants be killed by the British warship's guns. It was a characteristically Turkish proceeding. Either the British were to withdraw, leaving the engines and war material at Alexandretta untouched, or they were to endanger their countrymen's lives by carrying out a necessary operation of war after giving full warning to the townsfolk and the authorities. The captain of the Doris replied to Djemal Pasha that he would be held responsible for the death of the Allied subjects he proposed to execute. The American Embassy at Constantinople now used its influence with the Porte in order to induce the Ottoman military authorities in Syria to take a more reasonable view and, much of the war material in the town having been removed under cover of the negotiations, it was finally agreed that the two railway engines at Alexandretta should be blown up by the Turks themselves. On December 21 a landing party arrived under the white flag to witness the destruction of the engines. The Turks professed to have no high explosives. The captain of the Doris offered to supply them. The Turks agreed, but when all was ready their *parlementaires* became obstructive. They would not allow our men to blow the engines up, and they professed to be unable to find Turkish officers at Alexandretta with the necessary



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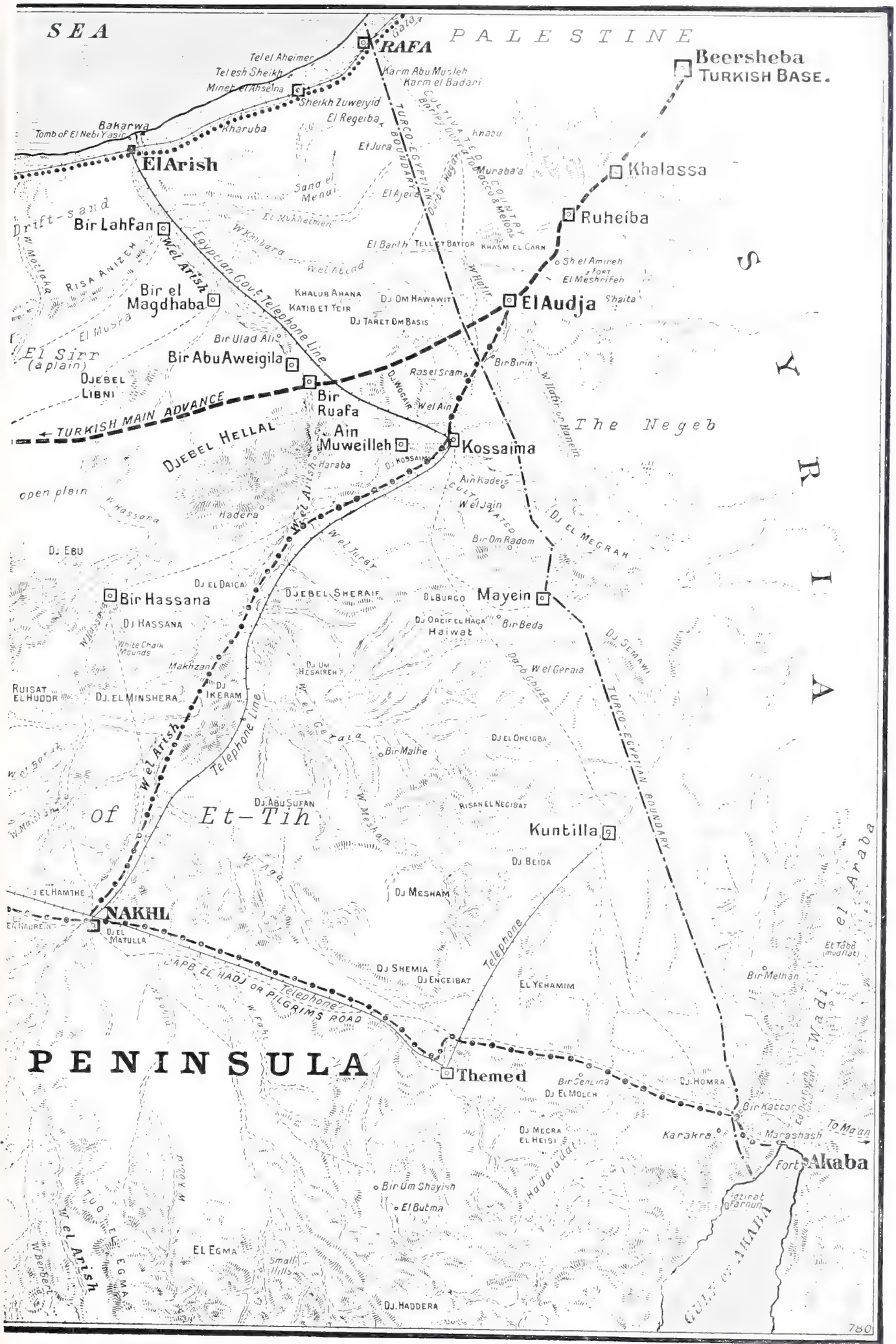


THE TURKISH ADVANCE.

FRENCH SOLDIERS AT ALEXANDRIA.

qualifications to do so. After a series of delays they yielded, though not till one had been thrown into the sea for impertinence, fortunately in a shallow spot, and another soundly shaken. At the eleventh hour a formula was discovered which saved Ottoman face. A British naval reserve officer who spoke Turkish was given a very temporary commission in the Turkish Army, and superintended the setting of the fuses and the placing of the explosives. The engines flew in pieces, some of which fell four hundred feet away, in full view of the 4,000 soldiers of the Alexandretta garrison, and H.M.S. Doris departed, having "singed the beard" of Djemal Pasha and inspired a wholesome respect for Allied naval power on the Syrian coast.

Henceforward British, and later French, cruisers paid constant visits to Alexandretta. Attempts to move military stores along the damaged coast road were rendered highly dangerous by their guns. On several occasions landing parties cut telegraph wires or destroyed stores and forage left on the road by the panic-stricken drivers who had been impressed by the enemy and abandoned beasts and carts when the shells began to fall. On one of these occasions some British sailors found that a cart which had been thus captured contained not military stores but oranges. They emptied the cart, but left £2 and a note for the owner, who was delighted to be overpaid, and sang their praises at Alexandretta.

On only one occasion during the first three months of 1915 did any fighting worth mentioning occur on the shores of the Gulf of Alexandretta. On February 6 a landing-party from H.M.S. Philomel came under a heavy fire from a concealed trench manned by about 80 Turkish soldiers. Six of the British and New Zealanders who formed her crew (for H.M.S. Philomel had been lent as a drill and training-ship to the Government of New Zealand) were wounded, three mortally. They were avenged by the cruiser, which instantly steamed in and opened a point-blank fire with her 4·7 inch guns on the trench. Of 80 Turks, more than 50 were killed or badly wounded, some being literally blown to pieces by the high-explosive shells. After this lesson the Turks at Alexandretta left the Allied sailors severely alone.

The operations of the British cruisers at Alexandretta, though less successful than they might have been had they commenced ten

days earlier, were none the less of use to the Allied cause, since they prevented the enemy from sending any large quantities of stores or any number of men to Aleppo for the Caucasus, Mesopotamia or the Egyptian border by the easy coast route. Troops and munitions had to be sent from Cilicia into Northern Syria over the Giaur Dagh by the pass sometimes known as the Syrian Gates. Something was done by the Turks to improve the road, but till late in March their transport columns and heavily equipped infantry suffered the maximum of discomfort and inconvenience as they struggled over the mountains, exposed to bitter wind and sleet and camping in slush and mud, till they reached the comparative comfort of the North Syrian plain.

On the coast of Southern and Central Syria no very striking operations took place during the winter. El Arish was more than once shelled. The Russian cruiser Askold landed parties at several places. Sometimes the Russians were well received: some, as at Khan Yunus and Ruad, were fired on. Only one seaman was lost during these operations, during which the Russians captured a disabled German merchantman and discovered some mines. Meanwhile the French hydroplanes carried by certain vessels of the Levant squadron paid frequent visits to the southern coast of Palestine, were able to obtain a considerable amount of useful information as to the situation of the enemy's camps, movements of troops and baggage-trains, etc., and at times flew as far inland as Beersheba.

After the commencement of the Allied operations against the Dardanelles the French Fleet took over the entire observation of the Syrian coast.

On April 19 the battleship St. Louis bombarded the Turkish entrenchments at El Arish, a hydroplane "spotting" for her. She drew the fire of 15 or 20 field guns, was once hit by a shell which did no damage, and inflicted some loss on the Turks. Early in May she shelled a big camp near Gaza, where a number of Ottoman soldiers had assembled preparatory to a review which Djemal Pasha was to hold. About 50 of the enemy were killed by shrapnel, and as many more wounded.

On April 29 the cruiser D'Entrecasteaux shelled some trenches at Tarsus on the Cilician coast, while her hydroplane with a French pilot and British observer flew over the railway station and dropped a bomb on a railway truck laden with dynamite. Other trucks carrying high explosives disappeared with terrible detonations, and the railway station was wrecked.

On May 10 the Jeanne d'Arc appeared off El Arish and again shelled the Turks there. On Ascension Day the cruiser D'Estrées appeared before Alexandretta. Her commander, M. de la Passandiére, summoned the Kaimakam to haul down the "flag of barbarism" which was flying over the German Consulate. The Kaimakam was, as usual, ill or absent. Thereupon M. de la Passadiére, having fixed a time limit within which the Consulate was to be evacuated or the flag hauled down, filled some 5·5-inch shells with black powder to avoid doing unnecessary damage and trained his guns on the building. As soon as the time-limit expired he ordered fire to be opened. The Consulate was wrecked, the obnoxious flag came down, and the nightshirt of the Consul, who himself fell out of a window, was whirled aloft by the shell blast to the summit of a high tree in the garden. Three Turkish soldiers who remained near the Consulate in spite of warning were wounded: otherwise there were no casualties.

The captain of the D'Estrées next turned his attention to a petrol depôt which might be used to supply the hostile submarines which had by this time appeared in the Aegean. Wishing to spare the town, he chose an hour when the wind had dropped on May 14, and ignited the depôt with a couple of shells, destroying 1,000 cases. A few days earlier the Jeanne d'Arc had destroyed a much larger depôt at Makri on the southern coast of Cilicia, where over 20,000 cases had been ignited. The bombardment of Budrum on the S.W. coast of Asia Minor in the Gulf of Halicarnassus should not perhaps be mentioned here, belonging as it does to the Aegean side of the naval war against the Turks. It was caused by a gross act of treachery on the part of the Turks, mostly armed civilians, who fired on two boats' crews who had been sent in to parley with the authorities by the captain of the Dupleix. About 20 French sailors were killed or captured, and the Ottoman authorities had the effrontery to publish a communiqué describing the repulse of a landing force. The Dupleix thereupon bombarded the Moslem quarter of the town for three hours, doing great damage.

Another case of attack by armed inhabitants on boat parties occurred at Banias, near

Latakia, on May 18, when a tug and a boat belonging to the D'Estrées, which had captured two enemy merchantmen and chased another to the little port, were fired on from the house-tops and landing-place. The two French officers in charge showed great coolness and decision. Lieutenant le Gaillou climbed from the tug into the little boat, which had been badly hit. One of her crew was dead. Another, his leg shattered by a dum-dum bullet, was plugging a hole in the boat's side with his uninjured foot. He made her fast to the tug and got her away while his junior, Lieutenant Van der Kemp, coolly picked off four of the armed inhabitants from the boat. To punish the armed inhabitants, who had posed as peaceable civilians till the boat approached, part of the town was destroyed by the D'Estrées.

The D'Estrées afterwards destroyed the house of the German Consul at Haifa, who had passed for a gentleman before the war, but had latterly been inspired to repair to the cemetery near Mount Carmel, where lie Napoleon's soldiers slain at Akka and Mount Tabor, and, assisted by a Turkish officer, to scatter their

THE RUSSIAN CRUISER "ASKOLD."

bones about the fields and deface their memorials.

The new year began in the Red Sea with an exciting escape on the part of Capt. Stirling, D.S.O., of the Dublin Fusiliers, and Seaman Hervé Le Grall, first from an accident to their hydroplane, and then from capture. The hydroplane, which had frequently given trouble, failed them at a great height above the precipitous gorges north of Akaba, and there was no hope of reaching the sea. Thanks to the magnificent coolness and skill of the Breton pilot, who handled the machine with amazing mastery, the hydroplane was steered down to one of the few spots among the gorges where descent did not mean instant death. As it was the hydroplane was naturally wrecked: Captain Stirling was pinned down under the machine and Le Grall thrown forward on his head and stunned. It was the first occasion on which a hydroplane had landed on *terra firma* without killing its passengers. Eventually Le Grall recovered, extricated Captain Stirling, who had begun to wonder whether he was to die of starvation pinned under the wrecked machine, and set off with him towards the shore. But Le Grall was badly shaken by his fall, and in the end collapsed. Stirling left him hid in a gully, and after making his way through difficult country full of parties of Turks and Arabs, reached the shore, and was picked up by H.M.S. Minerva. Next day a landing party searched for the missing pilot in vain. At nightfall the Minerva steamed away, but shortly afterwards her captain had a sudden presentiment that Le Grall would yet be found, and steamed back. The Minerva's searchlight thrown on the shore awoke the Breton, who had slept off the worst of the shock, made his way through the Turks to the beach in time to see the Minerva steaming away, and gone to sleep like a philosopher.

Late in February the French armoured cruiser Desaix landed a reconnoitring party near Akaba, accompanied by Père Jaussens, the well-known Dominican archæologist. There were no signs of Turks till the churchman discovered the tracks of military hob-nailed boots which led to a village. The landing party was reinforced, and French sailors drove the 50 or 60 soldiers who were lurking among the houses out of the village, killing and wounding a dozen of them and losing one man slightly wounded. Vessels of the Indian Marine took part in the patrol of the Red Sea, occasionally making useful captures and discovering mines in the Gulf of Akaba.

On March 21 the white-flag trick was played on H.M.S. Dufferin at Muweilah, on the coast of Midian, where there is an ancient Turkish fort. A British sailor was killed and an officer and nine others wounded. The fort was severely bombarded, and several Turks are believed to have been killed. In mid-May H.M.S. Northbrook took a dhow, on board of which were 6 German officers of the mercantile marine and 10 men, who seem to have been attempting to make their way north to one of the Turkish Red Sea ports. Both here and in the Levant there were many other

THE TOWN OF ALEXANDRETTA.

interesting and exciting incidents which cannot be recounted here. Enough that our sailors and those of our gallant Allies were worthy of their forefathers and made war as cleanly and chivalrously as they did.

It was not till the New Year that the Arab bands which had been engaged at Bir-en-Nuss began to show themselves again in any numbers to the west of Katia. Meanwhile El Arish had been converted into an advanced base and large quantities of stores collected there: small bodies of Turks had come down to El Audja from Beersheba, and others had strengthened the force which had occupied Fort Nakhl. During December the Turkish troops in the Jerusalem and Hebron region received reinforcements from the north, and Colonel Kress von Kressenstein, arriving at Jerusalem was greeted with acclamations by the population, the local Jews erecting an arch on which the words "Blessed are they that come in the name of the Lord" were inscribed in Hebrew characters. The Turkish authorities having shown their German allies to the public, next bade it acclaim the coming of the Holy Standard from the Great Mosque at Medina. But when the Standard arrived it was patent to all that while the pole might be of some antiquity, the flag itself was neither ancient nor particularly holy. What was even more depressing to Pan-Islamic enthusiasts was the death of the Mufti who accompanied the flag and had charge of it. Arriving after a toilsome journey at Jerusalem, the aged and venerable man addressed a meeting of the Faithful in the court of the Mosque of Omar. A violent thunderstorm put a sudden end to the meeting. The Mufti was drenched, and died of pneumonia in three days. This event naturally caused a great depression, as did the fall of the Ottoman Standard at the Konak at Jaffa while the fanatical Kaimakam was addressing a meeting and calling for volunteers.

It was, apparently, in the last days of November that the Wadi Um Muksheib ran down in spate and formed a lake at Er Rigm. The Turks, whose Intelligence Department was well served throughout the campaign by their Beduin auxiliaries, soon got wind of this, and no doubt decided to follow the El Audja-Gifgaffa-Er Rigm-Ismailia line of advance in consequence. Stores and camels had already been collected at Beersheba and El-Audja, from which the first troops sent to Nakhl had marched south via Kossaima, where there was a good water supply.

The force concentrated for the attack on Ismailia consisted of the 10th Division (28th, 29th and 30th regiments with part of the 10th Field Artillery Regiment), commanded by Colonel von Trommer; 23rd Division (62nd, 65th and 68th regiments), commanded by Behdjet Bey; and 25th Division (73rd, 74th and 75th regiments and part of the 25th Artillery Regiment), commanded by Ali Fuad Bey; part of the 29th Cavalry Regiment, two 6-inch howitzers, two machine-gun companies, the 4th and 8th Engineer battalions with a Pontoon Company, a battalion of the 64th Infantry Regiment, and a force of a few hundred "fedais" or "mudjahideen." The infantry

regiments of the 23rd and 25th Divisions each numbered only two battalions instead of the usual three, the third battalions having been left behind in Syria. The 1st and 2nd battalions of the 25th Division at least were above strength, averaging about 1,500 men. The total strength of the main force was probably about 30,000 men.

The Northern Column, which was to march by El Arish and Katia to El Kantara, was composed of the 80th and 81st Infantry Regiments of the 27th Division, probably two batteries of the 27th Artillery Regiment and a Mountain Battery, a Maxim Company, some cavalry and a force of irregulars commanded by Muntaz Bey, an ex-brigand who had murdered a brother-officer at Salonika, had been exiled to Jaffa, where he broke prison and turned highwayman, and had been pardoned under the new régime. Realizing that men of spirit like himself were likely to prosper under a revolutionary régime, he became a member of the Committee of Union and Progress and attached himself to Enver Pasha, whom he served in Tripoli. The Southern or Nakhl column was commanded by an officer of, if possible, worse antecedents, named Eshref Bey. It was composed of the 69th (Reserve) Regiment, detachments from the 128th and 129th Regiments, which formed part of the Independent Division of the Hedjaz, and about 1,500 irregulars, with some *Gendarmerie* and a mountain battery. The Northern Column may have numbered 6,000 men; the Southern column about 3,000. Djemal Pasha as Commander-in-Chief accompanied the main force, which was under the direct command of his namesake, Djemal Pasha (II.), commander of the VIIIth (Damascus) Army Corps.

The Turkish transport was well organized. Each regiment had about 250 camels: the Reserve transport was effected by shifts of 500 camels working over stages of as yet unknown length. Food was usually sufficient. The men were encouraged to be sparing of their water ration, but had little or no trouble from thirst during the march. The field guns were manhandled on soft ground; the heavy howitzers, two in number, of 15 cm. (6 inch) calibre, were hauled by a multitude of men and oxen, as were the pontoon boats, galvanized iron vessels of 7·50 metres length, 1·54 metres beam, and ·80 metres draught, constructed by the Hilgers Aktiengesellschaft, and the rafts ingeniously made of "tenekés" (kerosine tins) held in a wooden frame. The heavy howitzers, which do not seem to have been provided with "caterpillar wheels," are said to have required 36 oxen or buffaloes each to move them. The pontoon boats were dragged on wheeled frames, to which rollers or sledges could be fitted on soft ground. March discipline seems to have been good. The men on several occasions covered 20 miles a day, and the Camel Transport Companies were specially commended by Djemal Pasha for their endurance, some having marched 90 miles in three days.

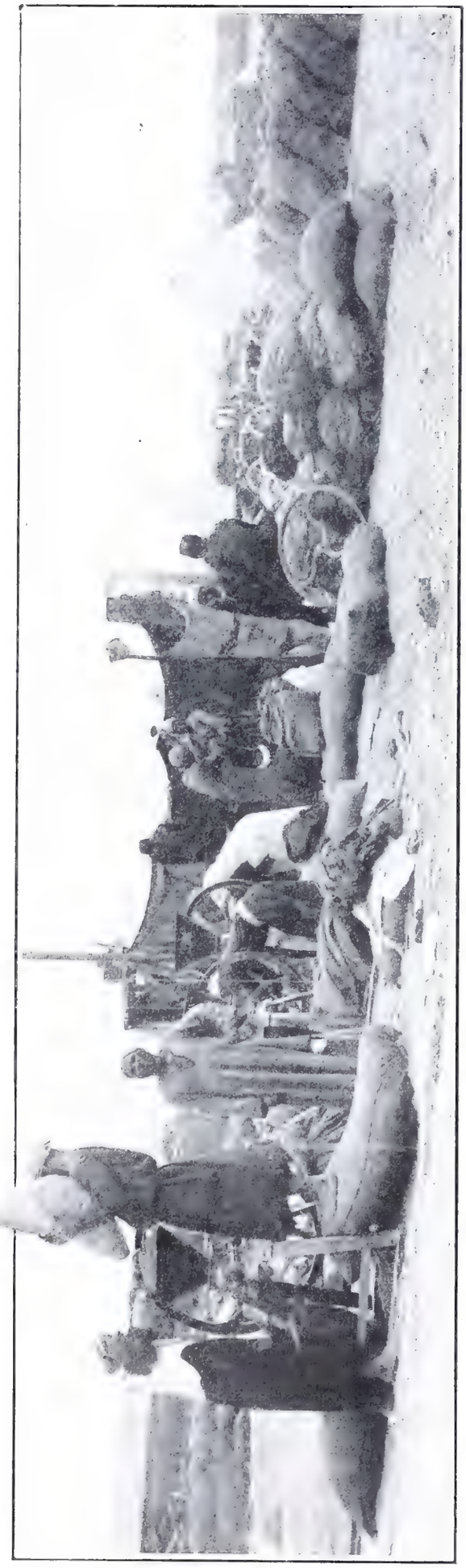
The story of the march can be briefly told. The bulk of the main army left Hebron on January 11. On January 18 a hydroplane located a force of about 8,000 men at Beersheba. This was probably the rear-guard of the main force, for on January 22 a strong Turkish force was sighted at Moia Harab. On January 23 the advance guard of the Southern column was marked down at Ain Sudr. By January 26 the advance guards of the Southern and Cen-

A PARTY OF THE NEW ZEALAND CONTINGENT
Trench-digging in the desert.

NEW ZEALANDERS IN EGYPT.
Cavalry on the march. Inset: Cupid, the mascot of the Wellington Mounted Rifles.

tral columns were near the Canal, the Southerners at Bir Mabeiuk, the Central column at Moia Harab, and also on the Wadi Um Muksheib, where from 2,000 to 3,000 men were detected. On that day part of the Northern column was engaged with our covering troops some miles east of El Kantara. We had an officer and five men wounded in the skirmish. It was now clear that the enemy's main attack was impending, and the New Zealand Infantry Brigade was consequently railed up from Cairo, the Otago and Wellington battalions being sent to El Kubri, the Auckland and Canterbury battalions to Ismailia. On the same day H.M.S. Swiftsure, Ocean, Minerva and Clio entered the Canal, where the French warships Requin and D'Entrecasteaux, H.M.S. Hardinge and two torpedo-boats were already stationed. At 3 a.m. on January 27 the Nakhl column made an attack on the Baluchistan and El Kubri posts, and was easily repulsed. Early on the following morning an attempt was made to rush the British outposts at El Kantara and was repulsed by the 14th Sikhs, who lost a native officer and had about 20 other casualties. For the next three days there were constant skirmishes at long range between our outposts and the enemy's patrols, while the warships sent occasional shell at the larger bodies which occasionally showed themselves but took care to entrench just beyond the extreme effective range of the shrapnel fired by our naval guns. More damage was probably done by our airmen, who flew their aeroplanes and hydroplanes boldly over the advancing columns, now and again planting effective bombs among the men and camels. Several of them had narrow escapes. One French pilot and a British observer, Lieut. Patridge, of the Indian Army Reserve of Officers, lost their machine through a bad engine failure some miles outside our lines, came back in the night, and were unhappily fired upon and killed by one of our pickets.

Meanwhile the Turks, marching rapidly and suffering from cold rather than heat, had brought their main body to the great pool at Er Rigm. They had crossed the Wadi El Arish at the well of Ruafa, marched thence across the open hard plain of El Sirr to Bir Hamma, where they dug a good well, and thence, as far as possible avoiding the great patch of dune country north of Djebel Yellef, moved on to the edge of the plateau and the slopes that descend into the drifts and belt. But not all Djemal Pasha's force had reached the hills above Bir Habeita, where the Turkish



THE AUSTRALIANS IN EGYPT.—Natives grinding corn for the Australian horses.

commander encamped eight miles east of Serapeum on the night of January 31. Four or five marches away were the 28th and 29th Infantry regiments, the 3rd battalion of the 30th, and perhaps other units. Why they were left so far in rear of the main body and why the Ottoman Commander-in-Chief did not await their arrival none could understand. On February 1 he transferred his headquarters to Katayib el Kheil, a group of low hills about eight miles east of the southern extremity of Lake Timsah.

The orders for attack which he issued on the following day show him to have been confident of success. His army had successfully crossed the desert: the men were in good condition: there had not been many deserters save among the irregulars, whose leaders forced Indian, Algerian and Tripolitan pilgrims whom they met on the northern or the Nakhl roads to join the "mudjahidin," and he firmly believed that the Indian Moslems arrayed against him would make but a show of resistance, if they did not desert *en masse*. And was it not an article of faith with every good Young Turk of the Committee of Union and Progress that Egypt was pining for the Ottoman deliverer, and that the Grand Sheikh of the Senussi was about to lead his valiant, if somewhat nebulous, armies out of the Sahara to attack the infidel in the rear?

By the evening of February 1 Djemal Pasha had prepared his plan of attack. The main force, composed of the 25th Division and all or part of the 23rd Division, was to attack the canal and if possible force a passage between Serapeum and Tussum, while its right wing held our troops at the Ismailia Ferry bridge-head by a feint attack. The Northern column was to attack El Kantara while demonstrating at Ferdan to prevent the reinforcement of the first-named post. The Southern column was ordered to make a demonstration at Kubri near Suez, an order which it carried out very feebly.

If the selection of the El Audja-Ismailia line of advance had been dictated by its greater practicability for wheeled transport, its security against interference from the sea, and above all, by the existence of the great rain pool at Er Rigm, the choice of the Tussum-Serapeum section of the canal as the principal objective of the attack was due to the consideration that success here would bring the enemy within a

few miles of Ismailia and that the ground on the east bank of the canal between the bridgeheads of Serapeum and Tussum favoured the attack far more than the open desert in front of the Ismailia Ferry post. The enemy's patrols had informed Djemal that the west bank of the canal between the two bridgeheads was unoccupied by our troops. It may have been partially unoccupied at the moment when the patrols last visited the opposite bank. Even for so large a force as that which held the canal it was impossible—not that it was necessary—to man every yard of the western bank of the canal. The Turks were certainly ignorant of the fact that part of the Tussum-Serapeum line was held by our troops, well concealed by the long narrow belt of trees that marks the western bank,* nor did they realize how rapidly reinforcements could be railed to any threatened point from Ismailia, and even, if necessary, from Cairo.

On February 1 Djemal Pasha seems to have reached Katayib el Kheil with his staff. The 23rd Division, forming the right wing of his force, seems to have reached this group of low hills about 10,000 yards east of the southern extremity of Lake Timsah on the previous day. As soon as the 25th Division and the Smyrna troops, who had started later from Er Rigm, had come into line with the right, the 23rd Division moved off against the Ferry at Ismailia, its left protected by Lake Timsah.

Early on February 2 an Indian reconnoitring force of all arms met the Turks about 4 miles east of the Ferry. A desultory action ensued in which our troops attempted to draw the enemy within range of our main position, while the Turks hung back. At 3 p.m. a sudden and violent sandstorm put an end to the engagement, and the enemy entrenched about 2½ miles south-east of the Ferry post.

The 25th Division reached a point within four or five miles of the Canal that afternoon. Its scouts were already ensconced on the eastern bank, immediately behind which, facing the line of trees on the western bank, are numerous sandhills and hollows where brushwood grows, good cover for infantry. The bank itself falls steeply to the Canal, but at several points therein are openings, gaps, so to speak, in a sort of sandy parapet, down which pontoons and rafts could be dragged. At the foot of the eastern bank is a narrow sandy beach not more than seven or eight yards wide.

After nightfall the 25th Division advanced, with the Pontoon Companies and Engineers of the 4th and 8th Army Corps, who were

ENVER PASHA.

the first to reach the water with their pontoons, some twenty in number, and five or six rafts made of kerosine tins in wooden rectangular frames. With them came part of the 75th Regiment, and some of the "fedais" or "mudjahidin" (Holy Warriors), as the Arabs called them, who accompanied Djemal's force, old Tripoli fighters and Balkan adventurers. They struck the gaps in the Canal bank, the most northerly of which is within a few hundred yards of the Tussum bridgehead, shortly before 3 a.m. on the 3rd. To their left, covering them, were the remainder of the 75th. Further south towards Serapeum were the 74th Regiment. Part of the 73rd seems to have been in support of the Pontoon companies, part moved into and

* The troops in the section Tussum-Dversoir (at the northern extremity of the Great Bitter Lake) of the Canal Defences were the following on the morning of February 3:

19th Lancashire Battery, R.F.A. (T.F.).
5th Battery Egyptian Army.
1st Field Co., East Lancashire R.E.
Canterbury Battalion, N.Z. Infantry (two platoons).
2nd Rajputs.
62nd Punjabis.
92nd Punjabis.
2/10th Gurkhas.
128th Pioneers (two platoons).
137th Field Ambulance.

THE MAORIS IN CAMP.

occupied the outer or day line of the Tussum post. The night was extremely dark and still. The silence on the western bank encouraged the enemy to believe that it was unoccupied. The men were confident, as were the Turkish officers. In a letter found afterwards on a dead officer, which had evidently been written on the evening of February 2, when the writer was resting within sight of the Canal, were the words, "It would be false to say that our march was not difficult and full of hardship, but every difficulty has, humanly speaking, been conquered thanks to our perfect organization, and to-morrow we shall be across the Canal and on our way to Cairo." The regimental preachers had warned their men that if victory and Paradise were in front of them, death and Hell fire awaited those who retreated. Tales of massacres of Egyptian Moslems by the licentious British soldiery were spread among officers and men in accordance with the traditions of the Committee of Union and Progress, and the countersign for the night of February 2-3 was "Sandjak-i-Sherif" (The Holy Banner). Some of the "mudjahidin" who accompanied the Pontoon companies to the water were noisy, and it was their exhortations, "Forward brothers, let us die for the Faith," that first warned the sentries of the 5th Egyptian "Field" Battery composed of mountain guns and Maxim section which, all unknown to the enemy had been posted on the west bank a short distance south of Tussum. At other gaps on the east bank all was quiet. "We heard nothing and saw nothing," said a prisoner. "Only a long way off there were dogs barking: we were at the water side when suddenly a Maxim opened on us."

It was then 3.30 a.m. Crowded in the openings of the eastern bank of the Canal or on the narrow beach below it, the Turks suffered heavily from case fired by the Egyptian mountain guns and from the well-served Maxims. Some boats which pushed out were sunk in mid-channel, and the men of the 62nd Punjabis near Tussum showed particular pluck in coming out of their cover to shoot under a hot fire at them, or even to charge down their own bank to repel attempts at landing. Further south towards Tussum a Territorial field battery belonging to the East Lancashire Division opened fire, supported by a platoon of New Zealanders of the Canterbury Battalion. The Turks lining the bank instantly replied with rifle and machine-gun fire. Their riflemen made it impossible to stand up near the Egyptian mountain guns, but the gunners stuck to their work, inflicting heavy punishment. Torpedo-boat No. 043, a tiny craft with a crew of 13 all told, now dashed up and landed a party of four officers and men south of Tussum. They scrambled up the eastern bank, found themselves in a Turkish trench, escaped by a miracle though fired on at point-blank range, and got back to their ship. The midget promptly dashed in between the fires and enfiladed the eastern bank under a rain of bullets, losing two officers and two men wounded, but destroying several of the pontoon boats lying unlaunched on the enemy's bank.

As the dark cloudy night lightened into dawn fresh forces came into action. The Turks who had occupied the day line of the Tussum post on the eastern bank advanced against the bridge-head, covered by artillery, while another body attacked the Serapeum post. The warships on the Canal and Lake Timsah now opened fire. Three batteries of Turkish field guns replied from the lower slopes of Katayib el Kheil. Their shells were admirably fused, but though they made good practice at visible targets, they never found the Territorial battery

between Tussum and Serapeum, which with some help from the New Zealanders beat down the fire from the eastern bank sufficiently to be able to turn part of its attention to the enemy's reserves as they showed themselves on the open desert further away to the east. A chance salvo from one of the enemy's batteries wounded four of the Territorial gunners, but it had previously run more risk from a small party of the enemy who had succeeded in getting a pontoon across the Canal in the dark. Their pontoon sank as it reached the western bank, but the men maintained themselves for some time and sniped the artillery horses, hitting a few, till dawn, when they were rounded up by some Indian cavalry and eventually surrendered.

Supported by the ships and by field and mountain artillery, the Indian troops now took the offensive. The Serapeum garrison (2nd Rajputs and 92nd Punjabis), which had already stopped the enemy three-quarters of a mile from its position, now cleared its front. The Tussum garrison, consisting of the 62nd Punjabis, drove the enemy back by a brilliant counter-attack. The 1/6th Gurkhas also distinguished themselves. Two battalions of the 28th regiment were thrown vainly into the fight. Our artillery gave them no chance, and by 3 p.m. on the 3rd the enemy was in full retreat with the exception of a few hundred men who had been left as a rearguard or had lost touch with the rest and remained in the bushy hollows on the east bank between the two posts.

Meanwhile the warships on Lake Timsah had been in action. A salvo from the Requin woke up Ismailia early, and crowds of soldiers and many civilians climbed every available sand-hill to see what was doing till the Turkish field guns posted in the east and south-east of the Ferry post position sent shells sufficiently near to convince them that it was safer to watch from cover. A husband and wife hastily disembarking from a Bibby liner which was lying off the landing stage at Ismailia, near which shell had burst, took a carriage and drove along the lake front, much peppered by shells till near the old French hospital, when they suddenly realised their danger and drove back at such speed as the ramshackle *arabiyas* and broken-down horses of Ismailia can muster. But the enemy's shell did more than startle. At about 11 a.m. two 6-inch shells fired from a couple of howitzers concealed in hollows about 9,000 yards from the south-east extremity of Lake Timsah hit H.M.S. Hardinge, an armed but unprotected transport belonging to the Indian Marine. One wrecked her funnel. The other burst inboard. Pilot George Carew, a gallant old merchant-seaman who had refused to go below, lost a leg, but continued to advise the piloting of the damaged ship into Ismailia. Nine of the crew were wounded, two mortally. The Hardinge's place was taken by H.M.S. Swiftsure. Later the 6-inch howitzers dropped

ARTILLERY WHEELS COVERED WITH STRAW TO PROTECT THEM FROM THE HEAT OF THE SUN.

INDIAN TROOPS REPELLING A NIGHT

two shells, one just short of and one just over the French coastguard battleship Requin. The Requin replied with her 10·8-inch guns, and the Turkish heavies eventually ceased their fire.

During the morning of the 3rd the 23rd Division moved towards the Ismailia Ferry post, which was held by the 52nd Sikhs, 56th Punjabi Rifles, a battery of Indian Mountain Artillery, and Australian engineers. On the west bank a Lancashire Territorial Field Battery formed part of the garrison of the Ferry post. The Turks used the ground well, digging shelter pits as they advanced, and were supported by two field batteries. An officer, apparently a German, exposed himself with the greatest daring, and watchers were interested to see a yellow "pie dog" which also escaped, running about the advancing line. Our artillery kept the enemy from coming within 1,000 yards of the outpost line. In the afternoon the demonstration ceased, save for a few shells fired as a nightcap. During the dark night that followed some of the enemy approached the outpost line, but dawn found them gone, save for a Greek doctor, who had fallen into our wire entanglements.

At the same time as the fighting ceased at the Ferry it died down at El Kantara. There the Turks had made a plucky night attack, which came to grief on our barbed wire. Another attempt to advance from the south was repelled by an advance of our Indian troops. Some damage was done to the enemy, of whom barely two regiments, the 80th and 81st of the 27th Division, were engaged, by Indian and Territorial artillery and by the guns of H.M.S. Swiftsure. The attack, during which it was necessary to advance on a front narrowed by inundations on ground so marshy at the edge of the flooded area that some of the enemy went waist-deep into the mud, never had the ghost of a chance of success. At the same time the Turks with a battery made a demonstration towards El Ferdan, but were easily beaten off by the troops there and by the gunboat Clio, which was twice hit. There were no casualties at El Ferdan and less than 30 at El Kantara, where only part of General Cox's Brigade—1/6th Gurkhas, 14th Sikhs,

ATTACK BY THE TURKS AT TUSSUM.

69th Punjabis, and 89th Punjabis—was engaged.

Late in the afternoon of the 3rd there was some sniping from the east bank between Tussum and Serapeum, and a man was killed in the fore-top of H.M.S. Swiftsure, which had left Lake Timsah. There was some fighting during the night on this section. Next morning sniping was renewed. Half a battalion of the 92nd Punjabis was sent out from Serapeum and found several hundred of the enemy in the hollows. During the fighting that ensued some of the enemy, either by accident or by design, held up their hands, while others fired on the company of the 92nd, which was advancing to take the surrender, killing Captain Cochran and several of his men. Reinforced by one company each of the 27th and 67th Punjabis and of the 128th Pioneers * and by the 62nd Punjabis, the 92nd soon overpowered the enemy after a sharp hand-to-hand fight in which a British officer killed a Turkish officer with a sword-thrust in single combat. Here was found the dead body of a German officer, Captain von dem Hagen, in whose haversack was discovered a white flag with rings and halyard in a special case. In fairness to the dead it must be added that there is no proof that any use was made of this flag, but, if one charitably supposes that it was intended for legitimate use, *i.e.*, for purposes of surrender, its presence does not say much for the moral of the German officers attached to Djemal's force. The enemy were killed, captured, or put to flight. They had about 120 killed and wounded at this point, and 6 officers and 251 men were captured, with 3 maxim guns.

The demonstration near Suez on February 2 was quite the tamest made in the Suez Canal campaign and need not detain the reader. It did not cost us a man. That night the Turks in front of El Kantara, El Ferdan, Ismailia Ferry and Suez followed the example of the greater part of the main force and made off as fast as they could towards Katia, Djebel Habeita, and Nakhl. In the afternoon of the 4th, after the end of the fighting between Tussum and Sera-

* The 27th Punjabis and the 128th Pioneers had arrived at Serapeum from the General Reserve on the previous afternoon.

A BRITISH AEROPLANE.

peum, Indian Cavalry and other patrols moved eastward and made some captures of prisoners and war material, and preparations were being made at Ismailia for an advance in force across the Canal that night in pursuit of the retreating Turks. To the disappointment of the Indian troops and of the large Colonial and Yeomanry reinforcements which had reached Ismailia, these preparations were eventually suspended.

So ended the battle of the Suez Canal. The British losses were amazingly small, totalling about 115 killed and wounded. Of the Turks over 900 were actually buried or found drowned in the Canal, about 650 were taken prisoners, and between 1,500 and 2,000 were believed to have been wounded. The Indians bore the brunt of the fighting and were well supported by the Allied warships and by the Territorial artillery who, if they had no opportunity to manœuvre, shot very well indeed. The Egyptians and the small number of Australasians engaged did their part. The Turks, and still more the Syrian Moslems, were brave enough, and their artillery shot well if unluckily, but their tactics were infantile. Counting on a rising in Egypt or the mutiny of the Indian Moslem troops, who evinced strongly anti-Turkish sentiments on several occasions during the battle, Djemal tried to break through our position under cover of demonstrations along a 90 mile front with a force which did not total more than 25,000 men and of which he brought less than half into action at the decisive point.

The British commanders at first believed—and very naturally too—that the Turkish leader had merely indulged in a reconnaissance in force, of rather an expensive character perhaps, but still only a prelude to the main attack. This impression was strengthened by the discovery made by our cavalry that the enemy, though he had burnt a certain amount of war material and left a few deserters behind, had drawn off

THE RED CROSS.

Turkish wounded being brought into a wayside station.

on the whole in good order. On February 6 our aeroplane observers, who had done excellent work during the fighting, reported that all the enemy in front of the Tussum-Deversoir section were concentrated at Djebel Habeita between Bir Habeita and Er Rigm, and that strong reinforcements were closing up. The news aroused great enthusiasm among the British forces. They had been reinforced on the evening of February 3 by the 7th and 8th Australian battalions, and on the following day by the Herts and 2nd County of London Yeomanry, with a squadron of the Duke of Lancaster's Own Yeomanry among other troops, and hoped to see Djemal Pasha commit himself to a real attack. But on the night of February 6-7 began the general retirement of the Turkish army, including that of the reinforcements from Djebel Habeita to Beersheba. It was a sore disappointment to General Wilson and his subordinates on the Canal.

Till then it had not been thought possible that Djemal had struck his hardest blow—and bolted. The very failure of the Turkish Higher Command saved the Ottoman Army. Had the British counter-attacked on the morning of February 4 they would probably have overtaken most of the enemy's artillery before they got clear away into the dunes. But it is easy to be wise after the event. The failure of the victors to discover among the prisoners troops from certain units which were believed to be on the Canal, whereas Djemal had for reasons unknown left them two marches behind: the weakness of the attack at all points where it was delivered and the difficulty of believing that an enemy who had crossed the desert with such rapidity and skill could have made such a gross tactical error as to attempt to force an extremely strong position held by a superior and better equipped enemy with some 12,000 men: all these factors induced the belief on February 4 and 5 that the Turks had the intention of making use of the strong reserves inexplicably left two marches to the east.

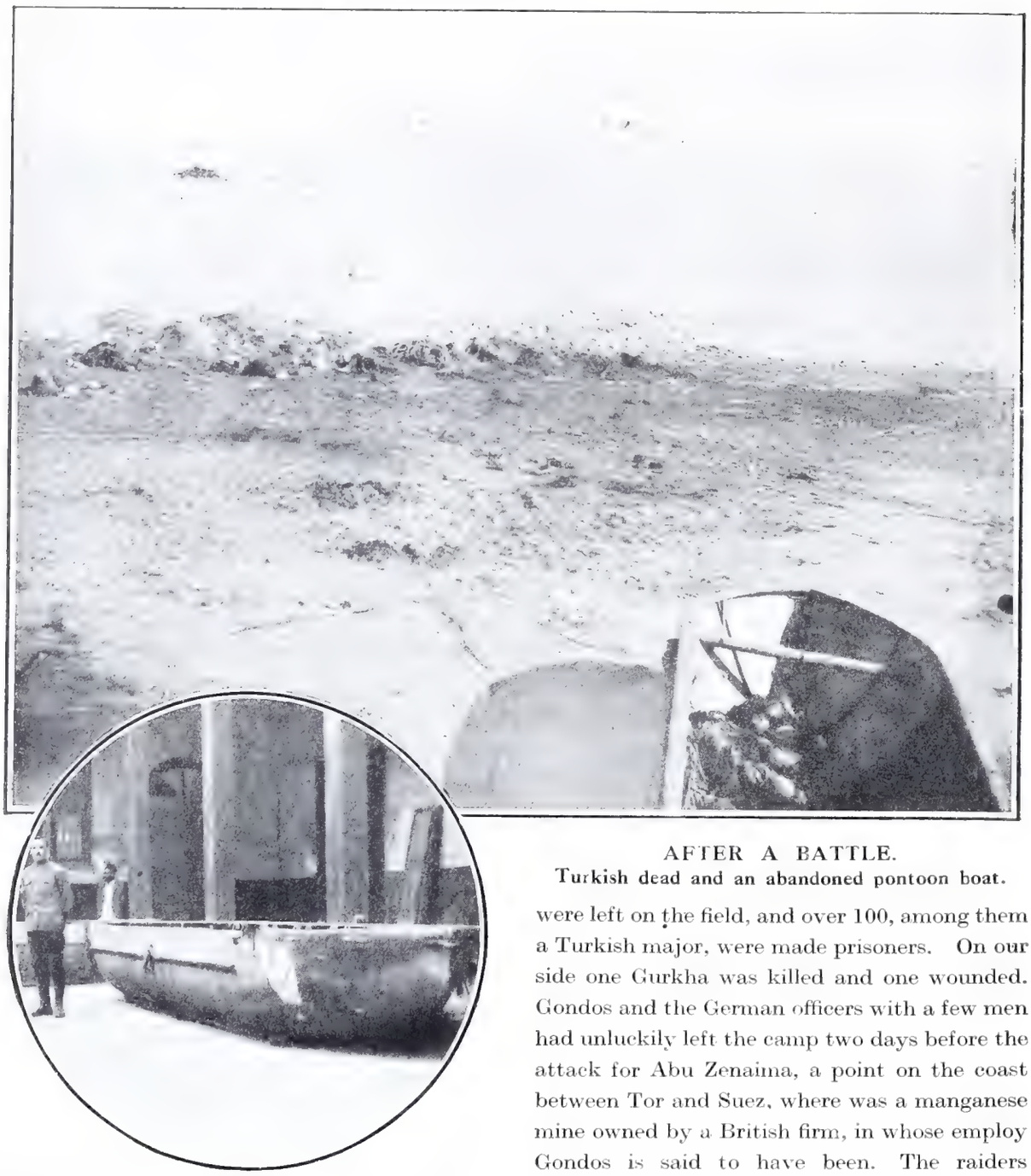
The net result was paradoxical in the extreme, the Turks having crossed the desert with unexpected success owing to the organizing skill of Kress von Kressenstein and Roshan Bey and the existence of the great rain-pool at Er Rigm, escaped from a most unpleasant situation largely owing to the almost comic tactics of Djemal Pasha. Having once emerged from the dune region they made off to Beersheba at their best speed, declared they had won a victory and would shortly return to Egypt to win another, and warned the public in Syria that it would be unsafe for anyone to express his doubts as to the completeness of the success which the Divine Providence had vouchsafed to the Imperial Arms.

If the Turkish main army had escaped and there was no hope, for reasons connected with roads and the water supply, of forcing the troops on the El Arish-Katia road and the Nakhl column to accept battle, one small Turkish column had unwittingly put its head

[*Hearne.*

SURGEON GENERAL WILLIAMS, C.B.
Divisional General of the Australian Imperial Force.

in the lion's mouth. In January the commander of the Turkish troops at Fort Nakhl, being informed that the Government quarantine Station at Tor was undefended, sent a body of fifty men with a German officer and an Austrian Jew, George Gondos by name, who passed as a German officer, to occupy the place. The party requisitioned food at the Monastery of Mount Sinai, where George Gondos professed to be the Chief of Staff to the Commander of the victorious invading Turkish Army, and news of their advent caused something of a panic at Tor. But on their arrival the raiders found 200 Egyptian soldiers in occupation. They there-



AFTER A BATTLE.
Turkish dead and an abandoned pontoon boat.

fore sent for reinforcements to Nakhl. These when they arrived brought up the strength of the force to about 200 men. It was a motley column. There were perhaps two dozen Turkish soldiers, as many more Arab soldiers and gendarmes, a few "fedais" and Beduin from Midian and Sinai, tempted by promise of loot. They occupied a small village five miles north of Tor itself, sent in arrogant messages to the authorities, and fired occasional shots at prodigious ranges. On February 11 a detachment of the 10th Gurkhas embarked very secretly at Suez, landed in the rear of the enemy, and advancing over the hills surprised their position at dawn on February 12.

The Egyptians co-operated with the Gurkhas, and the enemy's force was annihilated. Sixty were left on the field, and over 100, among them a Turkish major, were made prisoners. On our side one Gurkha was killed and one wounded. Gondos and the German officers with a few men had unluckily left the camp two days before the attack for Abu Zenaima, a point on the coast between Tor and Suez, where was a manganese mine owned by a British firm, in whose employ Gondos is said to have been. The raiders damaged the mine and mining machinery as much as they could and then departed, stealing some camels on the way to Nakhl.

The defeat of this raiding party following on the repulse of the attack on the Canal further discouraged the Beduin levies who had accompanied the columns under Djemal Pasha and Hilmi Bey. Most of them now disappeared into space taking the rifles with which they had been supplied. For a month after the fight on the Canal the enemy made no move worth mentioning. By this time their commanders had come to the conclusion that nothing could be effected against the Canal till the much-advertised Sinai Railway was somewhere near the Sinai Peninsula. It was decided to keep our troops occupied by raids and

feints and if possible to throw mines into the Canal.

On March 22 a column composed of the 3rd Battalion of the 30th Regiment, with artillery and machine guns and a few horsemen, appeared within a couple of miles of the Canal near El Kubri. Their advance guard, some 400 strong, led by German officers, met a patrol of 9 men of the 56th Punjab Rifles, under Havildar Subha Singh. The Havildar fell back, fighting most skilfully and courageously, keeping the enemy at a respectful distance, and finally brought his men into safety with the loss of two killed and three wounded, all of whom were brought off. The Havildar, who was himself wounded, was promoted to Jemadar and received the Indian Order of Merit. He had inflicted a loss of 12 killed and 15 wounded on the enemy. General Younghusband's brigade went out next day to attack the Turks, but there were delays, and the enemy, who had been under the command of a German, Colonel von Trommer, after an exchange of shots with the troops guarding El Kubri, made off towards Nakhl. The pursuing column was only able to harass their rear-guard for a while, but good work was done by our aeroplane scouts who accurately reported the enemy's movements as they drew off and placed several effective bombs. We had about half a dozen casualties in this skirmish. The enemy may have lost 40 men, including a few prisoners. A mine was actually found in the Canal, near El Kubri, and navigation was suspended for 24 hours while its southern reaches were being dredged. On April 29th another raiding party with maxim guns appeared near Bir Mahadet and engaged a detachment of the Bikanir Camel Corps and some Egyptian sappers. A British officer was slightly wounded and there were 8 other casualties, 5 killed or missing and three wounded among the Bikaniris and Egyptians. A strong column of all arms, a large proportion of which was composed of Imperial Service Cavalry, was sent out to engage and if possible cut off the raiders, who had been marked down by our air scouts. It took the best part of a night to cover the 12 miles from the Canal to Bir Mahadet, and when it arrived there it found the Turks gone. The aeroplanes, which were as usual admirably handled, found the enemy at a small well six miles further north. They warned the Cavalry and repeatedly gave them the direction of the hostile camp, but it was not till the early afternoon that the Patiala

[*Elliott & Fry*.

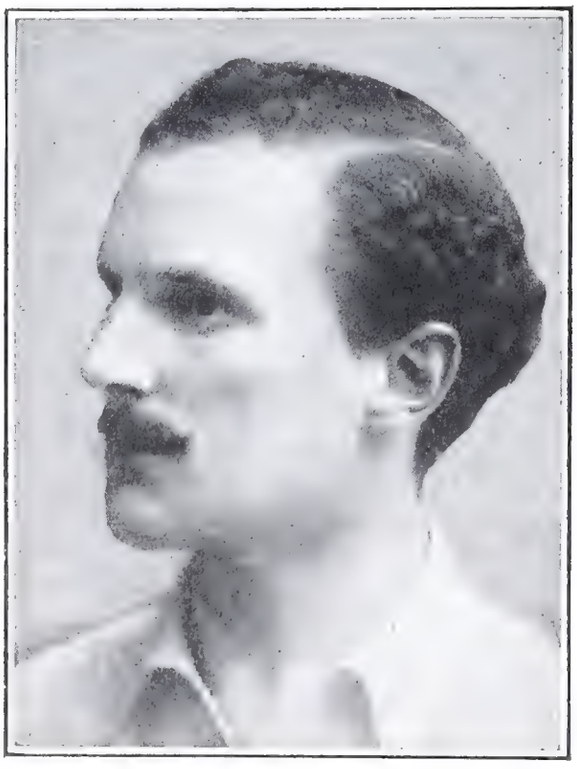
GENERAL SIR G. J. YOUNGHUSBAND.

Cavalry, who were leading, came up with the rear-guard of the enemy, who had just left the well. The order to charge was given : part of the Turkish rear-guard stampeded. A group of about a dozen Turkish soldiers led by a brave Albanian officer stood and opened fire from the flank on the small body of British officers and Patiala Lancers who were riding in. The handful of cavalry wheeled and charged the group, but two British officers and a native officer were killed or badly wounded before the cavalry got home. The Albanian, a son of Djelal Pasha of Djakova, was borne down by seven lance-thrusts—and survived his injuries. His men were killed or taken. No further pursuit was attempted. Thanks to excessive caution on the part of the Cavalry commander the enemy's column of at most 250 men escaped from four or five times its number with less than 20 casualties.

In May some contingents of Yeomanry were sent to the Canal. They showed much dash and zeal in chasing parties which came too close to our lines, and when Colonel von Lauffer with a mixed force of cavalry and camelry attempted rather a feeble raid near El Kantara at the beginning of June, they were rapidly on the spot, chased him away and captured his galloper.

A mine was found buried near the Canal after this attack, the Porte with its usual fatuity having informed neutral Powers that owing to England's arbitrary conduct in Egypt it would be compelled to take measures which would involve the closing of the Canal to navigation. But the attack on the Dardanelles, which was now being vigorously pressed, had by this time made Turkish military action in Sinai a thing of snarls and grimaces. The 10th and 25th Divisions, half the first line troops in Syria, had reached Constantinople by the end of May and part of the 27th Division followed in their track. By June 6 less than 25,000 Turkish troops, many of them second line formations, remained in Central and Southern Syria and in the Sinai Peninsula. The force left at El Arish and Nakhl may have numbered 7,000 men. It was mobile and hardened to desert conditions, but its chances of effecting anything against the Canal were small. Our air scouts kept a watchful eye on all the desert roads which the enemy might use and had developed remarkable powers of observation during the first six months of 1915. Though landing almost anywhere in the sand-dune region was most dangerous, they enjoyed a remarkable immunity from accident. Frequently fired on, they were never brought down, and at times were able to use bombs with effect. The fear inspired by our airmen was such that the enemy did his utmost to guard even his small camps from aerial attack by pitching his tents in divergent instead of parallel lines, and hid trenches and rifle-pits with straw mats and brushwood.

SIR RONALD GRAHAM,
Adviser to the Interior.



MR. R. STORRS,
Oriental Secretary to the British Residency, Cairo.

The failure of the Turkish advance had a calming effect in Sharkieh, the eastern province of the Delta, where the news that the enemy was within striking distance of the Canal had caused some uneasiness. Otherwise the mass of the population remained unperturbed by or indifferent to the warfare at the gates of Egypt. On the western side of the Delta the Beduin population gave no trouble, thanks to the correct, and indeed friendly, behaviour of the Grand Senussi, who successfully prevented Turkish or German agents from stirring up trouble among the western Arabs. It was only in Cairo and Alexandria that a small section of the population, composed mainly of the ignorant and the fanatical, fed with lies by Turkish agents and by some light-headed Nationalist students, showed any anti-Government tendencies. A bad example was set by the students of the Cairo Law School, always a centre of extreme Nationalism, a majority of whom absented themselves from the school

[Elliott & Fry

COL. A. H. BINGLEY,
Chief of Staff at the Suez Canal.

when it was visited by Sultan Hussein. Severe disciplinary measures taught the ringleaders of this demonstration a much-needed lesson. On April 8 a haberdasher of Mansura, Mohammed Khalil by name, a degenerate fanatic who had already been condemned for indecent assault, fired at the Sultan as he was driving past the Abbassi Hospital. The bullet happily missed by a few inches, and the would-be assassin was quickly overpowered. Khalil was tried by court-martial and executed on April 24. He seems to have had no accomplices. The Nietzschian dictum that the position of Sovereigns had improved since anarchists had begun to fire at them was fully justified in this case. Individuals and groups who had previously been hostile to Sultan Hussein, not for any personal reasons but because he had ascended the throne of Egypt as the nominee of a foreign Power, hastened to express their detestation of the crime, and his Highness, who had shown astonishing sangfroid when the attempt was made, received a popular ovation on his way to Mosque on April 9.

There was a certain improvement in the economic condition of the country during the early months of 1915, but some damage was done in the spring by locusts, which appeared in large numbers both in Syria and in Egypt. During the winter a Commission presided over by Mr. R. W. Graves, C.M.G., had conducted a thorough enquiry into the Budget and the general financial administration of the country. Its Report was said to have recommended many radical changes.

During the whole of this period the Anglo-Egyptian administration rendered most valuable support to the military authorities. The railways administration, always most efficiently conducted, particularly distinguished itself under the direction of its chief, Colonel Sir G. Macaulay, K.C.M.G., and the speed and precision with which troops were moved by rail, notably during the early days of February, won well-merited praise. Valuable services were also rendered by the Ports and Lights Administration under the direction of Rear-Admiral Robinson, and the Ministry of Interior, of which the Police Administration forms part, also gave much assistance to the military. The large British colonies of Cairo and Alexandria gave of their best. Many officials were permitted to enlist in the New Army; others assisted the Censorship. A volunteer corps—currently known as "Pharaoh's Foot"—was raised at Cairo in the autumn on the basis of the existing British Rifle Club. It drilled and shot regularly, and won the high opinion of its military instructors. Its services, which would have been called upon in the event of internal

[Russell.

REAR-ADMIRAL ROBINSON.

ALEXANDRIA.
Mule Transport arriving at Zeitoun Camp.

disturbance, were happily not required; but some of its members, and of the Alexandria Volunteers, among whom were a troop of horse raised by Mr. W. E. Peel of that town and brought to a high pitch of efficiency, took part in the organization of a Camel Transport Corps, which was formed with great rapidity under the auspices of Binbashi (Major) Whittingham, of the Prisons Department, early in February, and by its efficiency satisfied the most exacting Anglo-Indian officers. At a later date a Mule Transport Corps was raised for the Dardanelles operations from Jewish refugees from Palestine, commanded by Anglo-Egyptian officers and officials, and did good work. Much military material was turned out by the highly efficient workshops of the Railway Administration, which also sent a corps of its skilled workmen to the Dardanelles.

The military importance of Egypt to the British Empire was never more manifest than in the spring of 1915. The country was at once a training ground for Australasian, Indian and British troops, a base for the Allied Mediterranean Expeditionary Force, and a centre from which contingents could rapidly be dispatched in any direction. While guarding the Suez Canal against attack and retaining a sufficient force to deal with any possible internal disturbance, the British War Office was able to detach Indian troops from the Canal Defence Force for service in France, Mesopotamia, and at the Dardanelles, and to employ the greater part of the Australasian Army Corps and of the East Lancashire Territorial Division in European Turkey. As each force left Egypt new troops arrived to take its place and go through a course of training in the great camps round Cairo or near the Canal.

As the base of the Mediterranean Expeditionary Force Egypt received the great majority of the Allied wounded from the Dardanelles. Certain deficiencies which revealed themselves in the equipment or organization of the R.A.M.C. were made good by the Egyptian Sanitary Service and by private initiative. Doctors, nurses, surgeons gave up their time and much of their private practice to the service of the wounded, and the ladies of the British and French colonies, most of whom had gone through a first-aid or hospital course in the early days of the war, were unflagging in their attendance at the hospitals, where their work was highly appreciated.

Throughout this period General Sir John Maxwell was practically the Dictator of Egypt. His dictatorship was at once popular and successful: detesting red tape, handling the Egyptians with a happy combination of firmness and tact, maintaining excellent relations with the Allied or neutral colonies and with the Sultan, and using the services of British and Egyptian Civil officials with rare judgment, he maintained British prestige at a high level through a period of difficulty and stress, and won the affection of the best elements among the new subjects of King George V.

CHAPTER LXXIV.

TRENCH WORK AND TRENCH WEAPONS.

Life in Trenches—Its Discomforts and Dangers—Coming to and from the Trenches—The Work of the Army Service and Army Medical Corps—Modern Weapons involve the Use of Trenches—The Increase in their Power—Man-killing and Material-destroying Weapons—The Reintroduction of Grenades—Various Forms Employed—Trench Mortars—Heavy Guns—Machine Guns.

WHEN the Germans made their stand after the retreat from the Marne to the Aisne, a series of small engagements had enabled them to correct and consolidate their line, though without making any real advance. Both sides, therefore, settled down into the quasi-permanent habitation of their trenches. Weeks and months passed by with plenty of desultory fighting, which produced no very appreciable change in the situation. Artillery fire went on almost perpetually, and bombs and mine explosions were of constant recurrence; rifle and machine guns crackled intermittently and snipers were always busy. No engagements of any great moment took place, but attacks and counter-attacks, involving the capture and recapture of trenches, were frequent. There was a heavy loss of life—in one division the casualties of five weeks' trench warfare reached a total of 1,257 killed and wounded. Meanwhile continual labour on the entrenchments developed them into formidable works.

To afford shelter to the men guarding them they were elaborately provided with bomb-proof shelters and look-out posts, and with all sorts of refinements for making life in them less unbearable to their half-drowned and half-frozen inhabitants. Sometimes they were even converted into a travesty of houses, to which the soldiers often gave fantastic names. On the German side the soldiers had no compunction in looting neighbouring houses of their furniture for this purpose, to set it up in their trench abodes. With the Allies, too, from the deserted houses all round their positions, pieces of furniture could be obtained without much violation of the laws of property, and so even in the French and British trenches beds and chairs and domestic utensils of all sorts were a not uncommon feature. The men became extraordinarily ingenious and handy in contrivances for their comfort. They cut little fire-places in the side of the trench, fitted them with baskets made of the tin linings of ammunition boxes, plentifully holed with a pick or entrenching tool, and topped them neatly with chimneys made of bully-beef tins. They built rifle racks, and they made themselves snug little sleeping holes, roofing them with doors taken from ruined houses in the neighbourhood, covering the doors with earth.

Many interesting communications about life in the trenches were sent home to friends, embracing pretty nearly all the units engaged. For although a relatively small proportion of them were actually in the trenches at any given moment, practically all, including even

A FRENCH HEAVY GUN IN POSITION.

the cavalry, had their turn in manning the defences. The duty was far too dangerous, too exhausting and nerve racking, for the constant maintenance in them of the same men, and they had, therefore, to be very often changed. The frequency of relief varied with the reserve forces available. In the earlier days long and irregular turns were common, but later some such arrangement as forty-eight or ninety-six hours in the fire trenches, followed by forty-eight or ninety-six hours in the support or reserve trenches, and after a week or two of this alternation a spell of rest in billets, became the rule. Another arrangement was three days in the fire trenches followed by six out. Half of these were passed in support, the other furnished a complete rest. It was then possible to wash off the horrible dirt. In various places abandoned manufactories, breweries, etc., tubs or even vats were made use of for the purpose. As the men emerged from their ablutions they were furnished with a complete change of clothes, so that they could be comfortable till they once more returned to the filth of the trenches.

Reading the experiences of the men in them, one is as much struck by the horrible discomfort of the life they led as by its danger. It is, indeed, a record of appalling disagreeables; want of sleep, perpetual cold, filth and wet are the outstanding features of all accounts of trench life. The frequent night attacks and the necessity for vigilance throughout the dark hours kept the men constantly on the alert, and one wonders, indeed, how they could have withstood the strain and retained their health as most of them did. A Territorial private wrote home an account of his first experience of trench life, and mentioned incidentally that he had had four hours' sleep in roughly ninety-six hours, yet he spoke of himself as "quite fit." He, perhaps unintentionally, exaggerated his case, as the rule was even at night for half the officers and men to be on guard at a time, while the other half rested, and by day only sentries here and there along the line were on duty, and the remainder could sleep as much as they chose, or as the activities of the enemy would permit. An hour before daylight all stood to their arms. Night alarms and attacks and day-light bombardment were, however, so frequent that rest was perpetually broken, and the men had to look for proper repose to the time when they were withdrawn from the front line. Often when the soldiers had settled down for the night they would be called to arms by an outburst of fire from the enemy; or the Germans would send up star-shells. These when they burst threw a bright light on our position, which often presaged an attack.

What the men felt most was the cold and wet during the greater part of the winter. The weather might not always be severe, but

the wet was almost unbroken, the water sometimes rose to their knees. To sit for hours at a stretch in a perpetual cold footbath but little above freezing-point and sometimes below it, and to do this in a cramped and motionless position, made the nights in the trenches a perpetual suffering. "Cold!" wrote home one man, "I should think that Dante's Hell for the traitors was warm compared with our trenches." An officer detailing his experiences in the dug-outs, or narrow chambers carved in the trenches, described the cold in them as "simply awful." "I have got a touch of frost-bite in both feet," is a phrase of frequent repetition in soldiers' letters. "The cold is our enemy," was a subaltern's comment upon his first experience of the trenches. And in a later letter he stated it was "really horrible. One never ceases shivering. At night the soles of one's boots freeze, and one is awakened by icy feet and forced to get up and stamp till the blood consents to circulate once more. The short hours of daylight bring some respite, but the whole time one is forced to muffle up to the eyes." Thus the dirt which accumulated on face and hands remained. "The idea of washing in such cold is too awful, for it is impossible to restore the circulation by doubling or exercise in a narrow crowded trench, and in the dug-outs there is only just room to lie down." He noted that the authorities were just beginning to serve out coal and coke in the trenches, and that the use of braziers appreciably mitigated the suffering from cold. These braziers had sometimes to be used for nursing machine guns back into action because the cold had frozen the water in the cooling-barrel.

The authorities did their best to make the conditions more endurable, not only by the fires in the trenches, but also by the provision of greatcoats of goat-skin, having the long hair outside. These coats made a novel and striking departure in the British uniform, but they were described by their wearers as "splendidly warm," and so, with the generous supply of warm knitted things from the women-folk at home, and with such expedients as double sets of underclothes and socks, all that was possible was done to render the cold bearable. Indeed, some were able to write almost with enthusiasm of "cosy funk-holes" made comfortable with straw and waterproof sheets and blankets, and warmed with small braziers made out of bully-beef tins, while rum of excellent quality and strength helped to increase the genial feeling of well-being and avert injurious effects.

A FRENCH HEAVY GUN IN ACTION.

MINING A GERMAN TRENCH.
French Staff Officers watching explosion of a mine.

Even worse than the cold were the adjuncts of water and mud. Here is a typical experience. "The ground was all clay, and the mud and filth was ankle, sometimes knee, deep." And, alas for the British soldier's reputation for smart appearance, this correspondent had "never seen coalminers or dustmen look so filthy." When it rained, as it usually did, for the winter had a record rainfall, it was impossible to cook, for everything was drenched, and the fires would not burn. The misery of wet was thus accentuated by deprivation of the cup of hot tea which would have been so grateful. Another correspondent wrote of "viscid mud, four or five inches deep," which "squelched round the tops of one's boots and plastered over everything up to one's hat."

Drains in these French and Flemish trenches were impossible; there was nowhere to drain the water to: since, for the most part, the water was so near the surface that it naturally ran from the surrounding soil into them. Some attempt was made to mitigate matters by the use of pumps, but these afforded only a very partial remedy.

A newspaper correspondent wrote of thigh-deep water, out of which many of the men climbed, digging for themselves a niche in the earth half-way up the parapet, notwithstanding that they thereby forfeited some of the protection against the enemy's artillery fire. The reader may well be inclined to suppose that "thigh deep" water must be an exaggeration. But similar phrases were in common use. "Our men are in water well towards the middle, or rather in a mixture of mud and water," wrote a newspaper correspondent. An officer wrote of scrambling along a communication trench 3 ft. 6 in. deep in water After this a statement of a Territorial that in his trench the water came over boot-tops sounds very mild; but he was at the top of a slope, and his account discloses discomfort enough, for he added: "the sides of the trench kept tumbling in as we leant against them." In such cases the parapet often had to be made up with sandbags, of which millions were employed. But these had the disadvantage of rendering them more visible, and were consequently frequently destroyed by the enemy's fire.

Trenches sometimes fell into such a state of collapse through mud and water that they had to be abandoned, and new ones dug—an operation which implied something more than labour when conducted in the firing line, within 400 yards of the enemy, and his search-lights and star shells. Another Territorial

But more trying to the nerves of the soldiers, especially to the new hands, was the journey to and from the trenches—to the trenches, rather; for when a man had done his spell in them he was too seasoned and too tired to care much, though the risk was the same. In coming, it was the danger from bullets and shells which usually peppered the last mile of the way from billets to firing line, which had to be feared. The reliefs were never made in the daylight; that would have been to court destruction, but the enemy often guessed accurately the time after dark at which reliefs would be coming up, and behaved accordingly. Often he tried to check his time-table by sending up star-shells. In any case the newly arriving party found themselves walking under fire as they neared their journey's end; and the actual firing-line—the trench—appeared in the light of a shelter, rather than a post of danger.

In soldiers' correspondence there were frequent descriptions of their sensations on first going up to the trenches, and it is clear from them that they were not pleasant—"It is a nasty feeling," wrote an officer. First, there were the heavy guns of his own side, booming and whistling overhead, to disturb him, three miles in rear of the trenches. But the "really nasty" part was the last mile. It seemed so very likely that some of the bullets whistling through the air would come down low enough to do damage—as they unfortunately often did. There were long communication trenches, as a rule, to give underground protection for part of the way, but their condition was often so deplorable that a more dangerous above-ground route was chosen.

Trench life would have been far less bearable but for the splendid organization of the Army Service and Army Medical Corps. Never had soldiers been fed so well as were the British soldiers in this campaign. Though it was not always possible to get good meals brought up into the advanced trenches, the men of the Army Service Corps, by general consent, did their best, and were usually successful, though they, too, had to take the risk of shells and bullets in carrying out their work. Of course, men in the fire trenches took with them their own rations, and hunger was certainly not one of the hardships from which they suffered. The menu comprised bacon, bully-beef, bread, jam, cheese, tea, sugar, rum, and sometimes butter, and it was characterized by quantity and quality alike. Even tobacco and cigarettes were served out as rations, notwithstanding the large quantities sent

A HOTCHKISS MITRAILLEUSE IN USE AT THE FRONT.

A FRENCH BOMB-THROWING MACHINE.

privately from England. So with the Army Medical Corps. Men who were hit were never left lying untended in the trenches, and the doctors and stretcher-bearers were always ready to risk their own lives in attending to them and getting them away. If wounded men were left untended for some time it was because they were lying in front of the trenches, where the unrelenting vigilance of the enemy's fire made it impossible to reach them, until darkness permitted their comrades to make the attempt.*

Nor must the part played by the Army Ordnance Corps be forgotten. Always over difficult and often over almost impossible roads, along tracks frequently swept by shell-fire they never failed to bring up the supplies of munition to their fighting comrades. Truly the auxiliary Corps and Departments of the British Army played their parts well.

This persistent trench-fighting was the natural outcome of the deadly nature of modern projectiles and the vastly greater profusion in which they were employed which rendered protection from their effects more necessary than ever. The picture of the heap of empty cartridge cases fired by a French 75 mm. gun gives some idea of the expenditure involved. The old notion of slow firing has been quite discredited and the common-sense view prevails that the more you can fire, provided you have a fair target to fire at, the better. Moreover, the precision of modern guns makes it possible for the artillery to throw a veil of shrapnel bullets over ground across which reinforcements must come to support the front line. This can be made so thick that no troops can penetrate through it. This was impossible with the old weapons. Napoleon said, "Fire is everything, the rest nothing," and this applies with tenfold force to modern fighting. Moreover, the proportion of injuries inflicted by the artillery was far greater than formerly. French accounts show that approximately two men are wounded by the artillery to one by infantry fire. In Manchuria it was only 22 to 100. Artillery fire is, therefore, nine times more effective than it was in the Russo-Japanese War. Everything possible has therefore been done to add to the fire capacity of the troops. The infantry have had their destructive capacity enhanced by a rich endowment of machine guns, the artillery by giving them far heavier guns and howitzers than have ever been employed before in any number in the field.

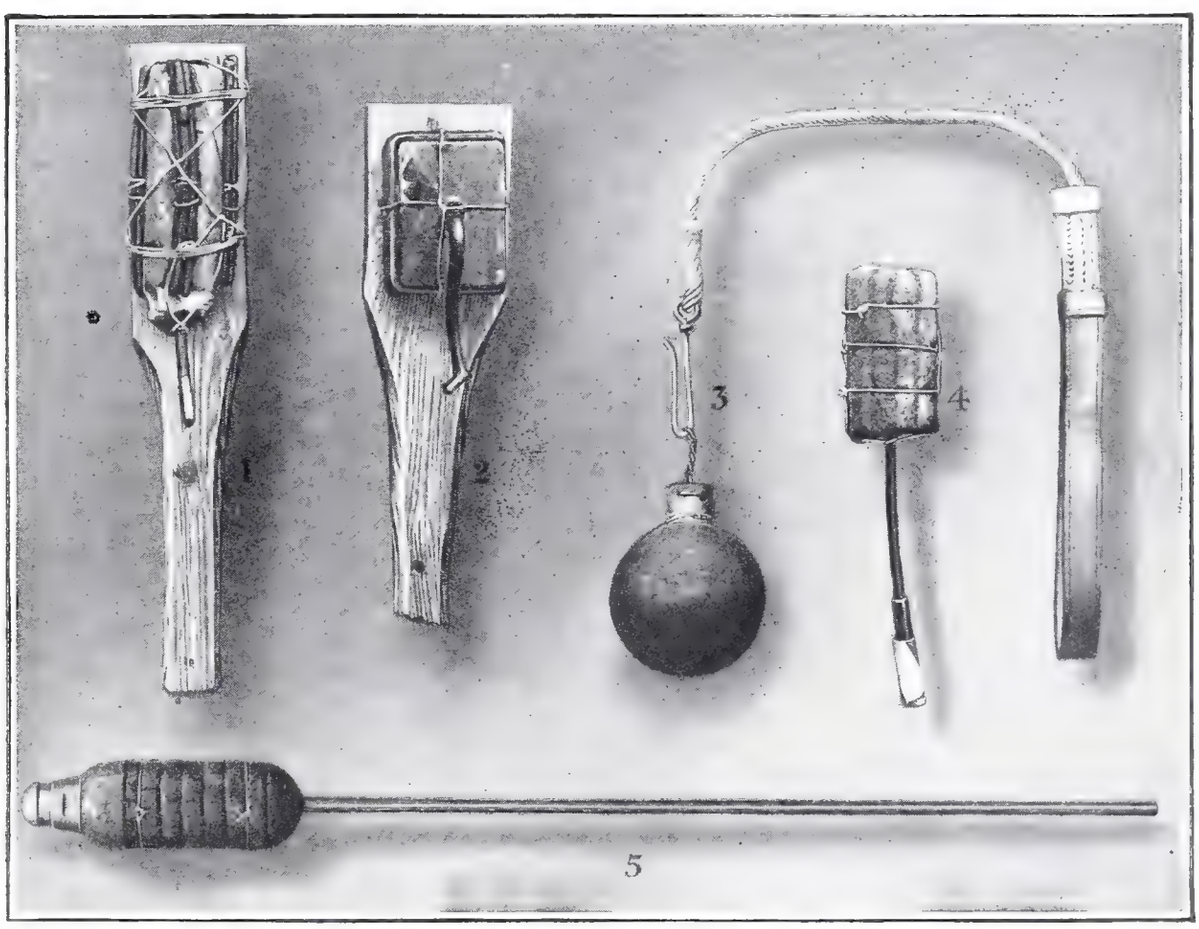
It followed, therefore, that no sooner did the Army halt to fight than it at once proceeded to go to earth for cover. This lesson had come down from the Russo-Turkish

*The work of the Army Service and Army Medical Corps has been dealt with in Chapters LXXII. and LXVI.

velocity which the shell had at the time of opening.

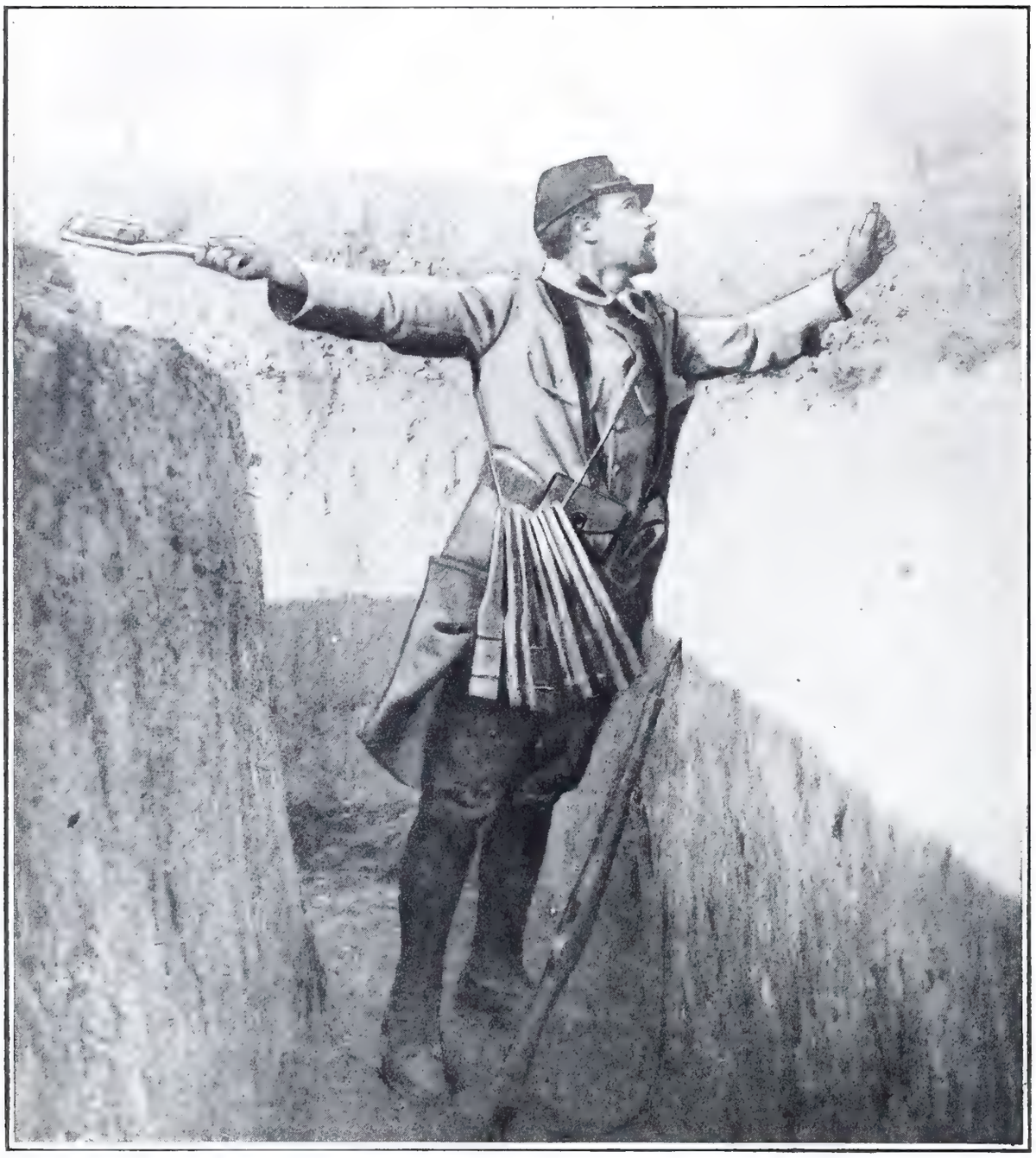
Now it is not difficult to comprehend that shrapnel bullets and those from infantry weapons can be easily stopped by a comparatively thin earthen parapet even such as a soldier can throw up in half an hour. When the use of deep trenches became common, such as were used by the Boers, by both sides in Manchuria and in the present war, it was plain that neither the projectiles of the infantry rifles nor those of the gunners' shrapnel were of much utility—neither could penetrate the cover behind which the soldiers were ensconced. Recourse was, therefore, had to the more primitive form of shell known as common shell—*i.e.*, a hollow projectile with walls strong enough to withstand the shock of discharge, and with the interior filled, originally with gunpowder, now by one of the various forms of high explosives, which weight for weight have a far greater disruptive force than the older material. Shells of this character can blow in trenches, totally destroy buildings, cut down obstacles and generally produce far higher local destruction than is possible with shrapnel, the bursting charge of which is small and only just sufficient to open the shell and free the bullets to go forward on their mission. For destroying wire entanglements shrapnel are useful, as the bullets cut the wire; but they need supplementing by high explosive

THROWING A "BRACELET" GRENADE.



Racket-grenade: 1. French (primed at base); 2. German (primed at middle). 3. French bracelet grenade. 4. A British bomb (primed by rotation of cap at end of match). 5. A German rifle-grenade.

TYPES OF GRENADES USED BY FRENCH AND GERMANS. AND A BRITISH BOMB.



THE HAND-GRENADE IN TRENCH WARFARE.

A French soldier throwing a racket-grenade, of which he carries a supply strung on a string.

shell to destroy the posts to which the wire is fastened, and to blow the latter away from the area chosen for breaking in.

At the opening of this war, so far as the guns of field artillery were concerned, the proportion of high-explosive shells carried by France or Germany was comparatively small compared with that of shrapnel. Thus in France 11·5 per cent., in Germany 20 per cent. For the English field-guns proper none were provided, because it was thought by our artillery authorities that the small bursting charge the 18-pounder shell could hold was not sufficient to produce noteworthy effect. It was considered preferable to rely on the heavy shells of the howitzers and 60-pounder heavy field guns in cases where high-explosive shells were needed, and it must be remembered that the proportion of these more powerful weapons was larger in the British Division than in that of any other European Power. However, last autumn it was seen that high-explosive shells were necessary even for the field guns, and they have since been regularly supplied with them.

Larger guns and howitzers have also been brought into the field to reduce the defences with which the modern army surrounds itself, and by which it creates a species of improvised fortress. Given forty-eight hours it is possible

A GERMAN GRENADE-THROWING RIFLE AND ITS SUPPORT.

infantry is assaulting a position the artillery on either side must cease its fire to prevent inflicting casualties on its own men. But clearly it would be advantageous to have some form of weapon which would enable shells still to be thrown among the troops. This was recognized from the early infancy of artillery, and a solution of the problem was found in giving hand shells, known as hand-grenades, to special bodies of infantry (grenadiers), and both in the Russo-Japanese War and in France there has been a revival of the custom.

The forms adopted by the different countries vary. France still adheres to a large extent to the old form. It consists (see Fig. 3, page 371) of a shell provided with a fuse burning for seven seconds. The man (as shown on page 371) places the leather strap round his wrist, attaches the hook to the end of the firing pin, throws the grenade, and by a slight jerk, pulls out the firing pin, which ignites the fuse.

The standard pattern of bomb now used in the British Army is an egg-shaped contrivance of steel, which contains a number of shrapnel bullets and a charge of trinitro-toluol, one of the latest forms of high explosives. At the moment of firing the soldier removes a safety catch, which releases a trigger, this flies off when the bomb is thrown and a pellet is released which ignites a length of quick-match, calculated to burn seven seconds. By the time the bomb reaches its destination the explosive charge is fired which bursts it, and the effect is produced

FOR FIRING BOMBS.
French soldiers using a catapult.

not only by the explosive force, but also by the bullets thrown in all directions. The bombs are carried by the soldier in a species of bandolier.

All sorts of contrivances were at first used to form improvised grenades and shells. Meat tins, mess-tins, and, in fact, anything that would hold a charge. The British, French, and Germans used the "fives-bat" form, as shown respectively at Figs. 4, 1, and 2, page 371, which consists of a cake of explosive, to which is attached a fuse ignited just before it is thrown. With high explosives it is really a matter of comparative indifference what the charge is contained in, the greater part of the effect is from its explosion, and not from its confinement in the surrounding cover. English French, and Germans also use a grenade which can be fired from a rifle. This has a range of about 400 yards. The form and mode of firing is shown on pages 371 (fig. 5), 374 and 375. The cartridge is the ordinary infantry one, but with a smaller charge, the long stalk takes the rifling, and thus ensures some degree of accuracy. The German grenade can be detached from the stalk and used as a hand grenade. French accounts seem to show that it is very often blind.

The hand grenade has been supplemented by more powerful weapons, such as the mine-thrower of the Germans, which has also been introduced into our Army. This throws a thin iron shell, containing over 100 lb. of explosive, and can be fired for a range of about 200 to 400 yards. Falling among men or in a trench its effects are very destructive. To project the bombs recourse has even been had to the ancient catapult (see pictures on pages 376 and 377).

There is really nothing new in all these contrivances. In the days of Vauban and Coehorn small mortars were used at sieges to throw shell into trenches. Carnot, "the organizer of victory" of the French Revolutionary epoch, proposed to cover the ground in front

AN IMPROVISED ENGINE OF WAR IN THE BRITISH TRENCHES.

The grenade, which rests in a rough tin "cup" fastened on to a metal spring, is hurled by the resilient force of the spring bent back and suddenly released. The iron underneath is used for pulling it down into the notch.

of a permanent fortification by showers of shot from mortars. At the siege of Gibraltar a large mortar was used by us to throw "bouquets" of small shells on the besieging Spaniards in their trenches.

At the early part of the seventeenth century every line battalion had its grenadier company—tall men who carried a large pouch with grenades, an axe to cut down obstacles, and a light musket slung over their shoulders. They covered the advance of the battle or led the way at an assault on fortifications. It was not very long before the grenade disappeared, because so long as troops fought almost entirely in the open the musket was found to be more effective. But the name grenadier survived long after the weapon which gave rise to it had disappeared from the field equipment,* to be

* "Grenadier" companies were abandoned in England after the Crimean War.

A GERMAN SHELL

Fired from a 42 cm. gun; flanked by a French 75 mm. shell (left), and a German 77 mm. shell (right).

revived again when the exigencies of the present war showed it was again necessary. At the present moment twenty men in each of the four infantry companies of a battalion are trained as bomb throwers and act, usually together, under the command of an officer.

With regard to machine guns, those of all nations fire the infantry cartridge to prevent complication in the supply of ammunition. In England and Germany the Maxim type has been adopted, in which the gun barrel is kept cool by a jacket containing water. In France, where the Hotchkiss has been adopted, the barrel is air-cooled, which is not as effective as the Maxim system. Recently a new form of weapon, known as the Lewis, has been introduced, and has been employed for work in aeroplanes. It is an ingeniously constructed type, very light, and in which the barrel is kept cool by a constant current of fresh air drawn over it by means of the powder blast at the muzzle. See illustration on page 374.

Everyone has heard of the huge howitzers brought out by Krupp and the Skoda Works in Austria. The latter appear to have been employed chiefly in fortress warfare, and the illustration on this page gives an idea of the huge size of its shells. The Krupps are even bigger. But pieces of this huge size and weight are not sufficiently mobile for universal employment, and the largest howitzers commonly used do not fire a shell over 9 inches in diameter.* Even these weigh 290 lb., and contain a large bursting charge of high explosive, and are very devastating in their effects. A 12-inch howitzer fires a shell of nearly 1,000 lb., and both these natures were used to some extent in the field. There was, too, a tendency to increase the size of field guns, *i.e.*, of those which immediately accompany the infantry divisions. For instance, the French employed large numbers of 10·5 mm. guns—*i.e.*, of a calibre of 4·2 inches.

It will easily be understood how, with these enormous projectiles to deal with, troops must be kept under cover until they are silenced, and this was found to be constantly the case in this present war.

* The German heavy field howitzer was *before the war* regarded as the limit in weight. It fired a shell of 90 lb.

SHELLS FROM THE FRENCH GUNS.

A day's expenditure of a single French battery of 75 mm. field-guns.

CHAPTER LXXV.

NEUVE CHAPELLE.

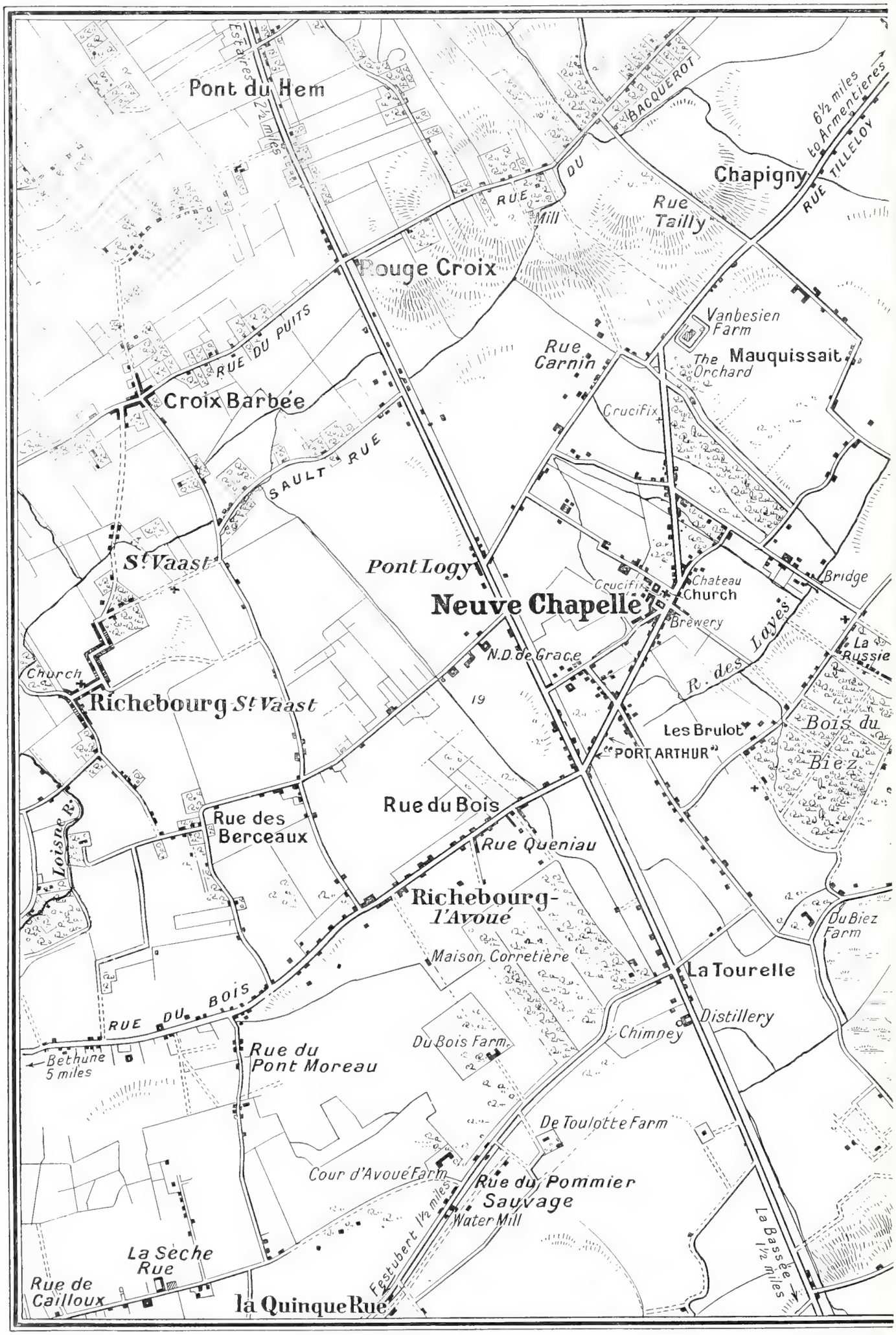
Reasons for the British Offensive—Position of Neuve Chapelle—Artillery Preparations—The British Attack—Delay in bringing up Reserves—Givenchy—The German Counter-attack—Results of Neuve Chapelle—St. Eloi.

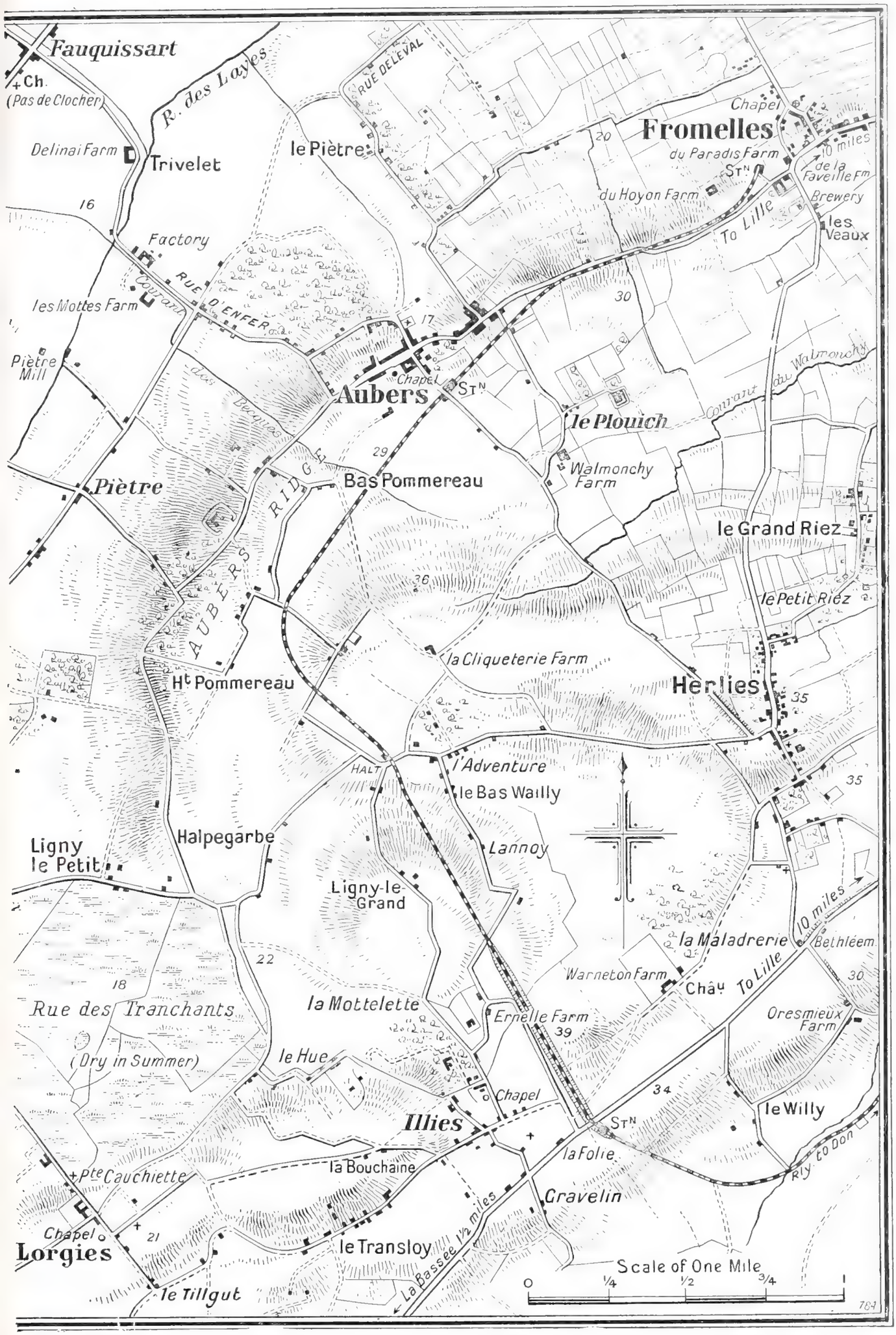
THE account of the war on the Western Front dealt with in Chapter LXX. embraced the winter period of cold, wet and gloom. From the military point of view there was almost complete stagnation; but yet the fighting was constant. The losses incurred without any apparent object and the continued inaction was beginning to affect the spirit of the troops. In the words of one of them: "We all wanted something more exciting than mud and water, and the constant risk of being picked off by a sniper was beginning to try the nerves."

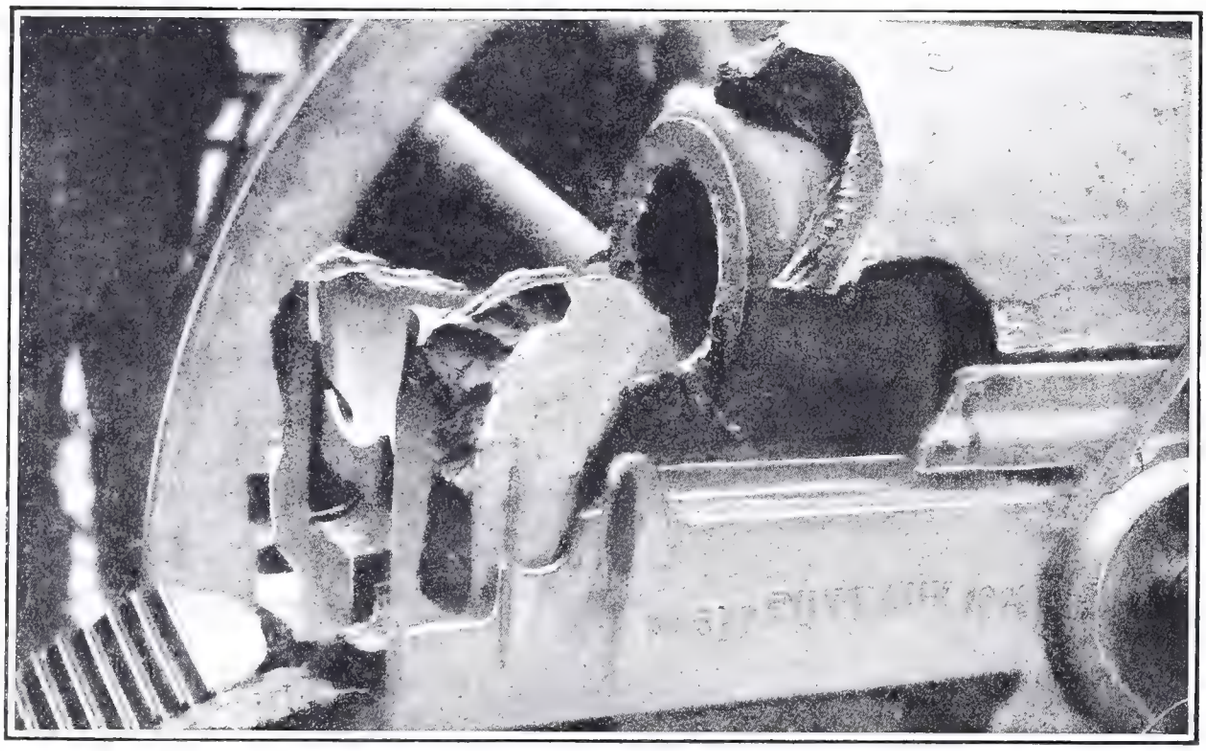
But spring was coming, and with it, it was generally believed, a great and general advance would take place. As subsequent history will show, it did not materialize, but still preparations for it were made betimes. On February 19, 1915, the British Commander-in-Chief communicated a secret memorandum to the leader of the First Army, Sir Douglas Haig. It was still more winter than spring, but in Sir John French's opinion the right moment had come for a vigorous forward movement. Many considerations impelled him to consider this desirable, most of all the need for keeping alive that offensive spirit among his troops, which would be dangerously weakened if the enervating effects of winter in the trenches were not changed for more enlivening measures. Another was the Russian success at this time against Hindenburg, which it was desirable to support from the west by attacking and holding the German troops there, so that the Russians might the better complete their work. Moreover, it was necessary to supplement the French efforts at Arras and in the Champagne.

March came in with brighter weather, the rain ceased and the saturated ground began to dry. The time seemed ripe for putting into action the plans outlined in the instructions to the First Army Commander. On March 8 the leaders concerned received full instructions as to their various tasks on the 10th, and these were at once communicated to the units under them.

The immediate objective of these was to be the village of Neuve Chapelle. This village lies some four miles north of La Bassée, at the junction of main roads, one to La Bassée southwards, and another from Béthune on the west to Armentières on the north-east. It is about eleven miles west of Lille. It had already been the scene of repeated combats. It first came into notice in October, 1914, when it was occupied by the Germans, as a rearguard position, during the British eastward advance. On October 16 it was occupied by the British, but was taken from them by the Germans on October 26 and 27, and it is interesting to note that at the time of the attack upon it now to be described it was held by the same troops, the VII. (Westphalian) Army Corps


Pont du Hem
Est Laires 2½ miles
BACQUEROT
6½ miles to Armentieres
RUE TILLELOY
Chapigny
RUE DU Mill
Rue Tailly
Rouge Croix
Vanbesien Farm
Rue Carnin
The Orchard
Mauquissait
RUE DU PUITS
Croix Barbée
Crucifix
SAULT RUE
St Vaast
Pont Logy
Crucifix
Chateau
Church
Bridge
Neuve Chapelle
Brewery
N.D. de Grace
La Russie
R. des Layes
Church
Richebourg St Vaast
19
Les Brulot
"PORT ARTHUR"
Bois du Biez
Rue du Bois
Rue des Berceaux
Loisne R.
Rue Queniau
Richebourg-l'Avoué
Du Biez Farm
Maison Corretière
La Tourelle
RUE DU BOIS
Distillery
Chimney
Du Bois Farm
Rue du Pont Moreau
Bethune 5 miles
De Toulotte Farm
Cour d'Avoué Farm
Rue du Pommier Sauvage
Water Mill
Festubert 1½ miles
La Bassée 1½ miles
La Seche Rue
Rue de Cailloux
la Quinque Rue


Fauquissart
+Ch.
(Pas de Clocher)
R. des Layes
Delinai Farm
Trivelet
le Pietre
RUE DELEVAL
Chapel
Fromelles
du Paradis Farm
Stn
10 miles
de la Faveille Fm
Brewery
du Hoyon Farm
To Lille
les Veaux
16
Factory
Courant
RUE D'ENFER
les Mottes Farm
30
17
Pietre Mill
Chapel
Stn
Aubers
le Plouich
Courant du Walmonchy
Pietre
29
Bas Pommereau
Walmonchy Farm
le Grand Riez
AUBERS RIDGE
36
le Petit Riez
la Cliqueterie Farm
Ht Pommereau
Herlies
35
HALT
l'Adventure
le Bas Wailly
35
Halpegarbe
Ligny le Petit
Lannoy
Ligny-le-Grand
10 miles
la Maladrerie
Bethleem
22
18
Warneton Farm
Chau
To Lille
30
Rue des Tranchants
(Dry in Summer)
la Mottelette
Ernelle Farm
39
Oresmieux Farm
le Hue
Chapel
34
Illies
Stn
le Willy
la Folie
Rly to Don
la Bouchaine
Pte Cauchiette
Gravelin
Chapel
Lorgies
21
le Transloy
La Bassee 1½ miles
Scale of One Mile
0
1/4
1/2
3/4
le Tillgut
784



DAMAGE DONE TO FRENCH 75 MM. GUN BY A GERMAN SHELL.

as drove the British out of it at the end of October.

The respective British and German positions round about Neuve Chapelle before the battle may be best described by noting that the roads in the neighbourhood formed an irregular diamond-shaped figure, the British line being on the western sides of the figure and the German line on the eastern sides, the village being situated at the apex of the eastern sides.

It lies in a flat, marshy, dyke-chequered country, but close behind it to the east the ground begins to rise gently towards a ridge, which comes westward in two spurs. At the end of one spur is the village of Aubers, at the end of the other is the village of Illies; both places were within the German lines. Beyond the junction of the spurs the ridge runs away north-east, from Fournes to a point two miles south-west of Lille; and along this ridge is the road to Lille, to Roubaix and to Tourcoing, three of France's chief manufacturing towns. Possession of the ridge was so important a step towards the possession of Lille that its occupation was regarded as almost implying the capture of that town. Neuve Chapelle formed the gateway which gave access to this ridge. The capture of Lille would indeed have been of the highest importance. It would have placed the Allies in a fair position to move against the Germans between that point and the sea. For this the capture of Neuve Chapelle was a necessary preliminary.

The village, although it occupied a considerable area, was of a straggling character; the population being quite small. A little river—the River Des Layes—ran behind it, to the south-east; and behind the river, a good half mile from the village, was a wood, the Bois du Biez. On the west, almost at right angles to the river, the village was skirted by the main road from Estaires to La Bassée. At the north of the village was a triangle of roads, where were a few big houses, with walls, gardens, orchards, &c. Here the Germans had established a strong post, which flanked the approaches to the village from that side. Their trenches at this point were only about 100 yards from those of the British. In other parts of the line, however, the distance was much greater, and therefore a much larger space of open ground had to be covered by the attacking forces before they could reach the enemy's lines.

Behind this area the Germans had established a post with machine guns at a bridge over the river, and one a little further up at the Piètre mill. Lower down the river, at the junction of a road into the village with the main La Bassée road, they were fortified in a group of ruined buildings known as "Port Arthur," whence a great network of trenches extended north-westward to the Piètre mill.

TRENCHES CAPTURED BY THE BRITISH AT NEUVE CHAPELLE.
The appearance of the earthworks and the ground which was torn up by the British shells.

of trenches in front of Neuve Chapelle lasted for thirty-five minutes, of which the last five were of special intensity. The artillery was then turned on to the village itself, and the British infantry at once advanced to the attack. The ground over which our troops advanced was very bad, sodden with water, greasy with mud, but the men went forward with admirable dash, rejoicing that the restraint they had been under during the bombardment was at length removed. Such was their eagerness to get at the enemy that there was indeed some anxiety lest they should get into the open too soon, and be caught by their own shrapnel. Yet, so great were the difficulties of the advance over the intervening ground that the movement automatically slowed down somewhat. For, as one of the men observed, it was "like trying to get at them with all your family hanging round your neck!"

The village was attacked simultaneously from two sides. On the north-west—that is, the left of the advance—the IV. Army Corps under General Rawlinson—the 23rd Brigade on the extreme left, and 25th Brigade, both of the 8th Division—assaulted; they were to take the village, and then press on towards the Aubers ridge. On the west and south-west—the right of the attack—was the Garhwal Brigade of the Meerut Division, who were intended to push on and through the Bois du Biez after taking the first line of trenches. There was no great distance to traverse before the first assault, for in some places the British and German trenches were only a short distance apart; so near were they that during the bombardment men in the British trenches were bespattered with earth and blood and fragments of human bodies flung from the German trenches by the terrible fire of the three hundred and fifty guns pouring an unceasing hail of shrapnel and high explosive shell on them. The din was deafening, the effect annihilating. The deluge of shrapnel bullets from our 18-pounders almost entirely swept away the wire entanglements in front of the 25th and Garhwal Brigades, while the high explosive shells directed against the enemy's first line of entrenchments blew them into mere shapeless pits filled with the shreds and tatters of once living men. This awful devastation, which took the Germans entirely by surprise, so shook them that the few who survived it lost all power of resistance,

A GERMAN GUN.

and the front line fell almost without resistance to our infantry. Of the few who were left to give themselves up the majority showed plain evidence of the effect of the lyddite explosions.

Faces yellow with the fumes, clothes torn off their backs, equipment and weapons destroyed and nerves so shattered that they appeared as if in a dream. Only a few escaped backwards, and the dazed remnant signified by feeble signs that they surrendered to the assaulting troops.

First to reach the goal were the 2nd Lincolnshire and Berkshire Regiments, who, after taking the first line of trenches, swerved to right and left, leaving room for the Royal Irish Rifles and the Rifle Brigade to pass through and push forward against the village. A tale of German gallantry is told belonging to this stage of the fight. A trench in front of the Berkshires was held by two German officers, alone with a machine gun, which they continued to fire until the bayonets of our men ended the struggle. Nor were deeds of equal gallantry lacking on the British side; a lance-corporal, who was wounded three times and told to lie down, insisted upon going on, and others like him kept on the charge though equally severely injured.

The Garhwal Brigade, which included the 2nd Leicestershire Regiment, was also fortunate, and took the first line of German breastworks within a quarter of an hour after the assault commenced.

Things went differently with the 23rd Brigade on the north-east of the village—*i.e.*, the left of the attack. For here, as has been recounted, the artillery had not been able to complete its work, and the Brigade was held up by intact wire entanglements, suffering heavy losses, which were particularly severe in the 2/ Middlesex Regiment and the 2/ Scottish Rifles (Cameronians), the old 90th or Perthshire Greybreeks, who heroically hung on to their task notwithstanding the obstacle by which their advance was held up. According to one account, all their officers (including the commander, Colonel Bliss), except a second lieutenant, were killed or wounded. At the finish, when the German position had been won, the only officer upright could assemble but 150 men of the battalion, which before the fight had had five times this strength. Sir John French, in a speech to the battalion afterwards, spoke of twenty-two of the officers having been killed or wounded. It had indeed received a terrible mauling, for few of the officers stood upright after battle, and the men had been mown down while fruitlessly tearing at the wire they could not overpass. They lay down in the open under a hail of rifle, machine gun and shrapnel bullets. Go back they would not, go on they could not. "You have many noble honours on your colours," said Sir John French, when addressing them in the speech just referred to; "none are finer than that of Neuve Chapelle, which will soon be added to them."

The 2/ Middlesex Regiment had a like terrible ordeal, and bore it with a like bravery. At either end of the German trench which they were attacking the converging fire of machine guns swept their somewhat crowded ranks;

Brigade, who had completed the first stage of their work, waited in the open for it to finish. When it was over their advance was resumed, and pushing into the village, they were joined by some of the Indians, who were fighting splendidly. Their progress brought them immediately to the south of the unfortunate 23rd Brigade, and enabled them to turn the left flank of the enemy in front of their comrades. Artillery was also brought to support, and between 10 and 11 o'clock the 23rd Brigade was able to get forward. The splendid way in which all the units worked together throughout the day, affording mutual help, was one of the outstanding features of the battle.

By 11 o'clock the whole of the village, and the roads leading northward and south-westward from its eastern front, were in British hands. The village, once a pretty place, was now an appalling spectacle. The bombardment had reduced it to a chaotic mass—one huge rubbish heap compounded of shattered buildings and dead men blown out of all resemblance to human form. Hardly the lines of the streets could be traced. Practically nothing remained unharmed but two wayside Calvaries, which, though the ground close round each of them was pitted with shell holes, were untouched. Even the bones of those long buried in the churchyard were torn from their tombs and scattered among the freshly dead bodies of the fallen Germans. The ground was bright yellow in patches from the lyddite, and the very lines of the trenches had in many places disappeared.

The first of the supports to reach this scene of desolation was the Rifle Brigade, and they plunged into a medley of Germans, some fighting, firing from houses and shelters, others running away or surrendering. Meanwhile the 3rd Gurkhas had made with their kukris a very thorough inspection of the houses at "Port Arthur," then had joined on to the Rifle Brigade, whom they knew well, just outside the village, and our troops thus united went forward on to the Bois du Biez.

During this time the British artillery had completely stopped the advance of the German reinforcements, which tried again and again to reach their fellow-countrymen, by a concentrated fire delivered along the several lines of approach. Nor were the more distant points from which the enemy could come neglected. For instance, the railway station at Quesnoy, east of Armentières, was bombarded just as German reinforcements were entraining for the scene of action.

At this stage, therefore, the battle was, apart from the holding up of the 23rd Brigade, eminently successful. The enemy had been surprised and shattered, and the victorious British forces set to work to consolidate the position they had won. But here the tale of victory, so far as the British offensive was concerned, ends.

The attack had been very violent, and the British infantry moving over ground difficult in itself, and covered with obstacles, as well as by its passage through the enemy's trenches and the buildings of the village, was as a natural consequence somewhat disorganized. Before going on farther, the various units had to be got into some semblance of order. The holding up of the 23rd Brigade in the wire had kept back the rest of the 8th Division, and the 25th Brigade had got out of its proper direction of advance. Then communications had to be restored, for German artillery fire had cut the telephone lines, though the Signalling Corps had displayed great bravery in going out from time to time to repair these broken wires. Visual signalling was impossible, because of the dangerous exposure it involved. Communication between front and rear had thus been rendered very difficult, nay, nearly impossible. A halt had perforce to be called in the attack, for fresh troops were needed, and these, though expected, came not. Also an orchard to the north of the village still remained in the enemy's hands, threatening the flank of the advance towards the Aubers ridge.

Sir John French, in his dispatch recording the battle, attributed this misfortune to the lack of observance of clearly expressed orders, and to the inability on the part of the commander of the 4th Army Corps to bring his reserve brigades more speedily into action. Whatever the cause, the result was the permanent arrest of the hitherto victorious advance.

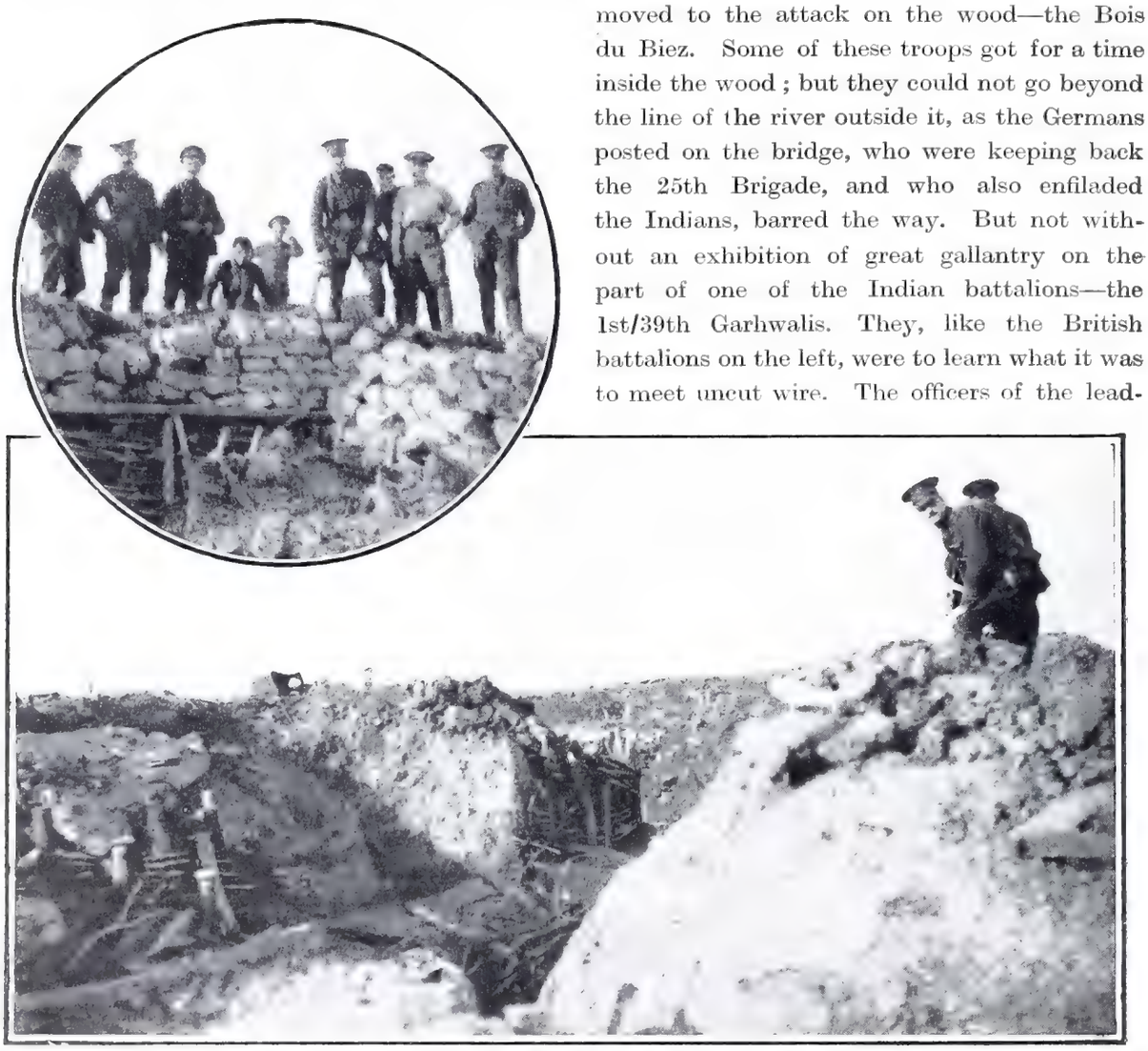
The delay lasted some four and a-half hours. The advance was not recommenced till half-past three in the afternoon. The 21st Brigade, on the left, was able to form up in the open without a shot being fired at it. So, too, opposite the Bois du Biez, the British troops on the right got out of their trenches and walked about during this interval. Seeing what was the paralyzed condition of the enemy after four and a-half hours had been given him to recuperate, it is interesting to speculate what would

have been the result had the British troops continued their advance uninterruptedly. There would have been a crushing defeat for the Germans, instead of a vain sacrifice of the British Empire troops. For although the Germans made no counter-attack, they had taken advantage of the lull to repair their position. They had organized the defence of their third line of entrenchments, and brought up reinforcements, for the British artillery could not continue to throw a curtain of fire behind the German lines throughout this long interval. Thus when the attack was renewed the enemy was ready for it.

When the attack began again the 21st Brigade advanced across the ground to the north-east of the village towards Piètre Mill, a group of buildings surmounted by a tall red-brick chimney, now bristling with machine guns. At first they made good progress; but then came a check. The Brigade was held up by machine gun fire from some houses held by the Germans from their third line of defence, and from defensive works in the German entrenchments on the Brigade's right. A like fate overtook the 24th Brigade, which was operating farther to the south, in the direction of Piètre; its advance also was stopped by machine guns, which were posted in the houses and trenches at a road junction 600 yards north-west of Piètre. Still farther to the right the 25th Brigade had its first experience that day of a check. It also was brought to a standstill by machine guns, placed on a bridge over the river Des Layes, north-west of the Bois du Biez.

Farther round to the south-west of the village, on the right of the British advance, the Indians encountered the same obstacle of machine guns.

While two Brigades of the Meerut Division were establishing themselves on the new line, the Dehra Dun Brigade, supported by the Jullundur Brigade of the Lahore Division, moved to the attack on the wood—the Bois du Biez. Some of these troops got for a time inside the wood; but they could not go beyond the line of the river outside it, as the Germans posted on the bridge, who were keeping back the 25th Brigade, and who also enfiladed the Indians, barred the way. But not without an exhibition of great gallantry on the part of one of the Indian battalions—the 1st/39th Garhwalis. They, like the British battalions on the left, were to learn what it was to meet uncut wire. The officers of the lead-



AFTER THE BATTLE OF NEUVE CHAPELLE.
Appearance of the trenches after the British victory.

NEUVE CHAPELLE.
Ruins in the village after the British bombardment.

ing companies were killed, ahead of their men. But the latter only hesitated momentarily They, indeed, somewhat lost their direction, but in swinging to the right captured, after fierce fighting with bayonet and knife, a length of trench, only, however, to be cut off by the Germans in another trench. At this moment the 2nd Leicester Regiment, which was in the same Brigade, and which had come forward on the left, rushed to their rescue. A bombing party crept down the Germans' own communication trench to their more advanced line, and literally blew the enemy out into the open, and as they were driven out the Garhwalis slew them. But the loss of these gallant hillmen was very heavy. Twenty of their officers and 350 of their rank and file were killed or wounded.

It was at this point of the battle that a Territorial regiment—the 3rd London—won the cheers of their Regular comrades by a splendid charge to aid the front line of battle.

But it must be admitted that the German machine guns brought the attack to a standstill. They amply proved the power of these weapons on the defensive. In some places where machine guns stopped the British advance the German troops were only in quite small parties; but in one piece of trench only 250 yards long they had fifteen of them, forming an impregnable wall of fire.

The first part of the battle of Neuve Chapelle showed that artillery in the attack is under modern conditions the dominating factor. The second, when the Germans by the pause in the advance had been able to rearrange their defences and provide them with a large superiority in machine guns, proved the enormous value of the rapid fire from these weapons, one of which can pour forth a fire equivalent to that of fifty infantry men.

It was obviously of the first importance to break down the German defence on the bridge over the river, which barred all further advance towards the Aubers ridge. Artillery fire was brought to bear upon it, as far as circumstances would permit; but its half-hidden position prevented this being properly done. Meantime, Sir Douglas Haig directed the I. Corps, stationed a few miles to the south, by Givenchy, to dispatch one or two battalions of the First Brigade to support the troops attacking the bridge, while three battalions were sent to Richebourg St.

THE BOMBARDMENT
Ruins of the village, showing the

Vaast, a village in the British lines facing Neuve Chapelle on the south-west.

But darkness was now coming on, the enemy had been able to bring up further reinforcements, and, though fighting went on in a desultory fashion until after dark, no further concentrated attack, and therefore no further real progress, could be made. The Germans, to use a homely phrase, had plainly had enough of it, and although during the night they kept up their courage by occasional bursts of rapid fire, they made no counter-attack against the new line which our men had so gallantly won, and were now consolidating.

The operations of this day may be closed with a reference to the attack which the I. Corps delivered in the morning from Givenchy, south of Neuve Chapelle, simultaneously with the attack against Neuve Chapelle ; but it had little fruit. The enemy's fire was insufficiently damped down, and the troops at this point did little more than hold fast the Germans in front of them.

When Thursday morning dawned the Commander of the British forces found the position to be that the first part of his plan had been successfully carried out. During the previous morning's work the British trenches, instead of being behind Neuve Chapelle, had been pushed on in front of it ; but the ultimate objective, which was to push on beyond Neuve Chapelle along the Aubers ridge, had not been achieved, consequent on the afternoon's check. It was determined to renew the attempt, and promptly the IV. and the Indian Corps, which had led the first day's attack, began work again. They were stimulated by a German counter-attack which was made just before dawn, but which was easily driven off with heavy losses, the Germans being pursued as far as their strongholds on the Piètre road. The 2/ Leicesters bore the brunt of this attack.

But no real progress was made, and it was soon seen that further advance was impossible until the artillery had dealt effectively with various houses and other defended places which were dotted about the outskirts of the village, the fire from which was sufficient to hold up the entire British front. The aid of the artillery was also needed to shell the wood of Biez, where the Germans massed for their counter-attacks, and to hinder the arrival of further German reinforcements, which were known to be on the way. So far as the wood was concerned, the shelling had a great effect, for the Germans were seen carrying out their dead for days afterwards.

On the left also our efforts to capture the Piètre Mill were again renewed. But, unfortunately, the weather conditions were bad—too bad to permit of aerial observation, while nearly all the telephone communications between artillery observers and their batteries had been cut, and it was impossible for the

OF NEUVE CHAPELLE.
havoc wrought by the British artillery.

artillery to fire with sufficient accuracy. This was fatal. The infantry, pressing forward, occupied a house here and there, but the artillery fire directed upon it could not be stopped, and the men suffered some loss and had to be withdrawn. There is nothing so demoralizing to troops as the occurrence of casualties from the fire of their own side. But no blame must be imputed to our artillery, which, handled with the utmost energy and skill, rendered invaluable service to the attack—playing, indeed, the main rôle in it. The trouble arose from the stoppage of means of communication, already alluded to, and from the difficulty of observation owing to the flatness of the country, while the weather prevented effective reconnaissance by our airmen.

Two points chiefly barred the advance; one was the enemy's position about the Pièbre Mill and the other the bridge over the river lower down, and these were difficult for us to deal with effectually. The Germans for their part spent the day in shelling the British lines, but without making any impression, though they inflicted some losses.

During the night following fresh reinforcements—Bavarian and Saxon Regiments from Tourcoing—began to arrive, and on the third day, Friday, March 12, the British troops were reduced to the defensive. Before dawn the Germans opened fire on Neuve Chapelle, and at five o'clock began a counter attack in large columns against the extreme right and the extreme left of the British positions. But their efforts only met with disaster. Apparently they expected to find their enemy farther back; for the Bavarians attacking Neuve Chapelle advanced in column of route, an officer on horseback with drawn sword, leading right up to the Worcester Regiment, who met them with such a fire as to completely shatter their opponents. At another point the Bavarians blundered into the fire of 21 machine guns, and were practically destroyed in a moment. The slaughter was so great that their unwounded comrades made ramparts of the bodies of those who had fallen. In their desperation they even used a body to finish off the parapet of a trench when digging themselves in. These and other incidents showed that they were still demoralized by the bombardment and defeat. This was further proved by the number of wounded Germans who came over to the British lines throughout the morning.

The weather conditions were still unfavourable, and hampered the British artillery action which was essential to reduce the two strongholds, the Pièbre Mill and the bridgehead over the river, which still continued to hold up our advance. Both the attacking corps, the IV. and the Indian, tried to capture these positions. Their orders were to break down the German fortified positions at all costs, and most gal-

lantly they essayed their impossible task. The 2nd Cavalry Division, with a Brigade of the North Midland Division, was also moved forward to give immediate support in the event of the success of the First Army opening up opportunities for their favourable employment. Opportunities for cavalry action, however, never arose. Lodgments were effected in some of the enemy's strongholds, but the occupation was always temporary, though here and there the assailants managed to maintain themselves for a few hours; and, indeed, some ground was permanently gained. But the artillery found it increasingly difficult to discriminate between friend and foe. Sorties from the trenches which were in some cases only about 50 yards apart constantly took place with varying fortune to either side, and the mixing up of troops, Allied and German, which thus took place rendered it impossible to make proper use of the guns. It was during one of these attacks upon the houses round the Piètre Mill that the 6th Gordons, a territorial battalion, lost their commander, Lt.-Col. Maclean, a most gallant and capable officer, who had brought his men to a high pitch of efficiency and training.

Meanwhile the Germans continued to deliver violent counter-attacks, supported to some extent by their artillery, which was more favourably placed on higher ground than that available for our guns, but all their efforts were shattered by the steadfast British lines, and were, indeed, easily repulsed. At only one point, north-east of the village, did they even succeed in reaching the British trenches, and although they entered them they were at once driven out and pursued. One of their attacks, in the afternoon, cost them 612 prisoners, and of these it may be said, as also of others taken on this day, many seemed to welcome capture as a relief from the terrible ordeal they had passed through. Even complete companies surrendered bodily; yet it cannot be said that they had not fought well. But they all showed signs of complete exhaustion; they had lost large numbers of their officers, and they complained of hunger as well.

There comes a time in all fighting when troops become weary of the struggle and cease to make further efforts. The German command was surely at fault in forcing exhausted men to continue these counter-attacks, which could gain no success, and only involved further loss of life. But that was never a matter of consideration to those German leaders who directed the operations from a safe distance in the rear.

When night came on the 12th, Sir John French was convinced that all that could be done for the time had been done. Orders were given to consolidate the positions won, and suspend any further offensive. The gain amounted to about 1,200 yards on a front of 4,000 yards over ground which had been a labyrinth of German trenches.

Throughout Saturday, the 13th, the Germans kept up a violent bombardment, in addition to minor counter-attacks in the morning and a heavy one in the afternoon, all of which were repulsed. It was a wearying day for the worn-out British troops, for, tired as they were with fighting, they had to spend it in hard digging, in order to maintain themselves in their new positions, and so done up were many of those who manned the loopholes in the new trenches that it was no uncommon thing for them to fall asleep as they stood.

The day, however, was not entirely one of defensive warfare for the British Army. The

RUINED BUILDINGS AT ST. ELOI.

7th Division, which had now come up on the left, made some progress in the direction of Aubers.

On this day, as well as on the earlier days of the battle, the British airmen had been busy trying, so far as weather permitted, to hinder the Germans in their work of reinforcing their advanced line. On Friday the railway stations within the German lines—Don and Douai—had been raided, and at Don part of a train was destroyed. On the Wednesday before an airman descended within 150 feet of the ground at Menin, and destroyed a pier of an important railway bridge. Others wrecked Courtrai railway station. In spite, too, of the mist, airmen did their best to assist on the battlefield itself, and helped the gunners to get their range. It meant flying at a very low elevation, but it was done, "with unspeakable daring," wrote an observer, commenting upon one feat which he witnessed. One British aeroplane on the first day was brought down by the German guns, and its occupants were killed.

With Sunday came relief for our battered battalions, though even on that day artillery duels continued. It had been a bloody conflict. The losses during these three days' fighting, which would have been worse but for the devoted work of the doctors and stretcher-bearers, who ignored alike danger and fatigue, exceeded 12,000—out of some 40 battalions actually engaged. 190 officers and 2,357 of other ranks were killed; the wounded comprised 359 officers and 8,174 men; 23 officers and 1,723 men of other ranks were missing. It will be noted that these figures give a high percentage of officer casualties—in proportion the number of officers hit was twice that of men in the ranks. There is often some such disparity, but the excess in this battle was attributed in particular to the fact that in advancing over the intricate country, intersected with hedges and ditches, officers had to expose themselves by going forward to reconnoitre the ground, and find the best way to get their men over or round obstacles without crowding in narrow places, such as gaps and bridges—they had to lead, not merely direct their men.

The price was heavy, and the result not great, but the British Army had broken the German lines, and had shown them what was the might of the British soldier in attack. How deeply impressed were the Germans was indicated by a panegyric upon the behaviour of British troops delivered to an American correspondent by a German officer present at the battle, which contrasts pleasantly with the wild mendacities published by the German newspapers about this time. He described them as "lean, full-templed, long-jawed" men, youngsters for the most part, who "looked as though they were the sons of good fathers, or city clerks, or boys who had played in the open air." He told enthusiastically of a battalion (the Royal West Kent) he had seen attacking; how they closed the frequent gaps made by their fallen comrades, and how when they took cover, having gained the last possible inch, and were yet hopelessly exposed, and so were ordered back, they just rose to their feet,

[*Lafayette.*

MAJOR G. H. WALFORD,
Suffolk Regiment (killed at Neuve Chapelle).

contrary to all the rules, and strolled back, stopping on the way to light cigarettes and pick up the wounded. Cut down by the score, they would not hurry their pace. The regiment was true to its traditions from Corunna and Vimiero, of the Punjab and the Crimea. From troops such as these all may be expected. The pity is that for want of support they were not able to win a really decisive victory.

From a military view the losses incurred were to a large extent justified. For they brought to an end for a time the Germans' offensive, due to the stinging blow which they had received, which completely demoralized them for many miles north and south of the battlefield. Moreover, it helped the French in their fighting at Notre Dame de Lorette by preventing the withdrawal of German troops

[Elliott & Fry.

LIEUT.-COL. F. D. FARQUHAR, D.S.O.,
Princess Patricia's Light Infantry (killed).

[Lafayette

LIEUT.-COL. R. F. UNIACKE,
Royal Inniskilling Fusiliers (killed).

to reinforce their line there. Sir John French had achieved his end of infusing an offensive spirit into the men. "This time," said one of them, "it was pushing the Germans, instead of trying to hold them. You can't realize unless you have been in it from Mons onwards how that bucks you up." The same thing was said more scientifically by an officer: "It has given us confidence in our strength, tested our organization for the offensive tactics required by this kind of war, and demonstrated the power and precision of our artillery."

Before leaving the subject of the British losses it may be interesting to record as a proof of good organization in the Army that all deficiencies were made good within a few days of the action.

What the Germans' losses were during the three days' battle cannot be accurately ascertained. It was estimated by the British authorities that they could not have been less than between 17,000 and 18,000. It must be remembered that most of these took place in their counter-attacks conducted in ridiculous and fatally thick formations. Several thousands of their dead were seen and counted on the battlefield—6,000 dead was one estimate; 30 officers and 1,657 men of other ranks were captured, and positive information was given to the British Headquarters that upwards of

[Lafayette.

LIEUT.-COL. H. P. UNIACKE, C.B.,
Gordon Highlanders (killed).

Lafayette.

LIEUT.-COL. G. B. LAURIE.
Royal Irish Rifles (killed).

OFFICERS WHO FELL AT NEUVE CHAPELLE.

12,000 German wounded were removed by train. These extraordinarily heavy casualties form a tribute to the immense violence and effectiveness of the British artillery, as well as to the good work of the infantry when they caught the Germans in the houses of Neuve Chapelle. That the Germans felt their losses and the way in which they had been administered was evident from their quietness at this part of the front for some time afterwards. Weeks grew into months without an effort to reply to the punishment they had received. An assault on the extreme left of the British lines a month later was their first sign of renewed activity. They contented themselves with a vague reference to a future day of revenge with which the Crown Prince Rupprecht of Bavaria endeavoured to console them in his Army Order admitting the defeat. Their immediate concern appeared rather to be that the foe might after all advance and capture Lille ; for about the time of the battle their large hospitals there were removed to Tournai, where also many of the German officers billeted in the town removed their sleeping quarters. Large numbers of the civil population were evacuated by way of Switzerland, being told on placards that the English, being unable to beat the Germans, were trying to starve them. A good deal of the machinery in the cloth factories, particularly that containing copper parts, was removed to Germany.

Efforts had also been made to assist the attack on Neuve Chapelle by holding attacks at various points. During the night between March 11 and 12, that is to say about 12.30 a.m. on the Friday morning, the 17th Infantry Brigade, supported by the 18th Brigade, of the 4th Division of the III. Corps, attacked the Germans at l'Epinette, a hamlet some two or three miles north-east of Neuve Chapelle, near Armentières, and captured the village with the adjacent farms. It began as a surprise attack with bombs, and the first houses in the village were obtained without much loss, but the remainder of the place had been heavily wired, and the enemy got away along communication trenches while a further attack was in preparation. The Germans were said, however, to have suffered considerable loss, whereas the loss of the British was slight, 5 officers and 30 men of other ranks killed and wounded. The topographical result of this operation was the gain to the British of 300

LIEUT.-COL. W. M. BLISS,
Scottish Rifles (killed).

yards on a front of half a mile. The Germans attempted to retake the position, but suffered heavy losses in an ineffectual effort.

At another point of the British line, still a few miles farther north, an attack was made upon the enemy's position to the south-west of Wytschaete. It was timed to commence in the morning of the 12th, but a dense fog delayed it until 4 o'clock in the afternoon. It was then begun by the Wiltshire and Worcestershire Regiments, but they were hampered by the mist and the approaching darkness, so that nothing was effected directly, though of course the enemy was kept occupied. The attack delivered by the First Army from Givenchy has already been referred to.

No battle on the Western Front—not even the first British engagement at Mons, which for weeks afterwards was shrouded in so much secrecy by the authorities ; not even the final scenes at Antwerp—gave birth to so many rumours and varying stories as the battle of Neuve Chapelle. It was a glorious victory ; it was a bloody fiasco. It had made reputations ; it unmade them. It had demonstrated the might of the British offensive ; it proved the limitations of that power—and any other point of view or theory that the narrator wanted to prove. More or less of this kind of

AN IMPROVISED TRENCH KITCHEN.

contradictory assertion is inevitable in all big engagements, and the veil of official secrecy which hung so heavily over this campaign was bound to stimulate the crop of rumours. The fact that Neuve Chapelle was a victory which halted half way—was to the good, but it had been meant to be something far greater. This is perhaps the explanation why this particular action produced so many diverse stories, and so much gossip. Also it occurred at a time when criticism on the operations had begun to fail for lack of material, and was therefore exercising its tongue upon an extensive scale with regard to the war generally. It is easy to be a critic of the closet, the part can be played by any man capable of writing with a fluid turgidity, combined with a daring lack of military knowledge.

It is not difficult, however, to estimate the essential features of this encounter. It must be admitted, when this is done, that the battle was as creditable to the Germans as to the British. The British massed secretly large forces and an overpowering weight of artillery. They fell upon a small force of unsuspecting Germans, and burst a way for themselves through the enemy's first line of defences. In this phase of the battle it is businesslike organization which we have to commend on the British side: the infantry could not help winning those battered trenches. Yet there was also an admirable display of British valour on the left, where the 23rd Brigade was hung up by the wire entanglements. The second phase of the battle was the converse of the first. It showed the organization at fault, which brought about the fatal delay, with the sad accompaniment of British gallantry displaying itself to the full but in vain, as the men dashed themselves, time after time, against the storm of machine gun bullets. During the final days of the battle this exhibition of valour they shared with their enemies, whose counter-attacks, however recklessly unwise in their inception, were certainly carried out bravely. The Germans were entitled to congratulate themselves upon the ready skill and tenacity with which they took advantage of the British blunder on the first day, and the success which attended their efforts; they could not help losing their first line of defence; only determined fighters could afterwards have saved, as they did, the Aubers ridge and the road to Lille. It was all the more unnecessary, then, that their scribes in the Press should have tried to explain their loss of the village by concocting loathsome and ridiculous slanders against the British troops. Both sides had much cause for pride and satisfaction over a fiercely fought battle, which was sanguinary and picturesque and full of military interest. On the whole it gave an appreciable advantage to the British side, as it stopped for a time the attacks of the Germans, but it exercised no really substantial

influence over the subsequent course of the campaign.

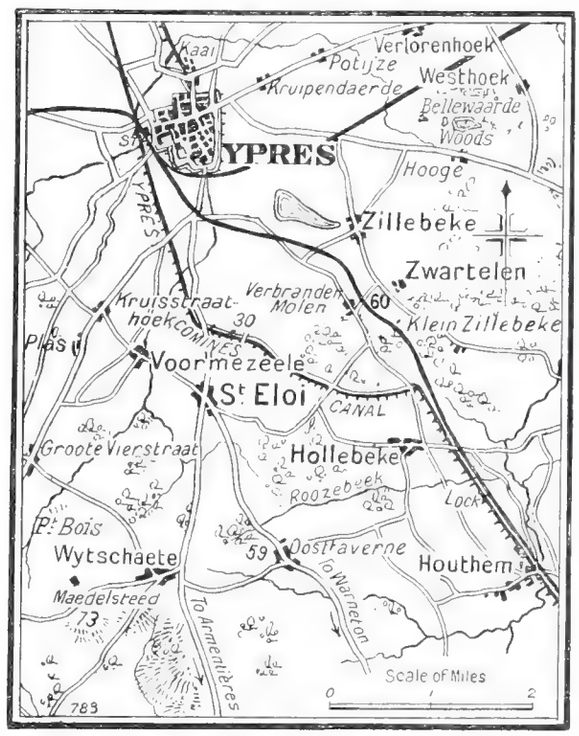
We have said that one effect of Neuve Chapelle was to check the German offensive, and that for long afterwards they remained quiescent. That statement holds good, notwithstanding offensive action by them of some importance which will now be shortly described, for that action was undertaken so quickly after the Neuve Chapelle days that it should be regarded rather as part of that battle—a diversion by way of counter-attack in another quarter, an effort prompted probably by a desire to prevent reinforcements from reaching Neuve Chapelle, should the British be contemplating a renewal of their attack.

The action to which we refer took place on Sunday, March 14, the first day upon which the Neuve Chapelle battle was regarded in the British lines as definitely concluded. The place was St. Eloi.

St. Eloi is not in the Neuve Chapelle area at all. It is a village lying three or four miles south of Ypres, at the junction of two main roads, the Ypres-Armentières road, north and south, and the Ypres-Warneton road, which branches off in a south-easterly direction. In March, 1915, the British line ran close outside the village on the east; it rounded it on the south, and then bent away westwards. The Germans were facing this line on both sides of the village. At the south-east corner, inside the British line, was a large mound or tumulus.

At 5 o'clock in the afternoon of the 14th, the Germans, who had taken advantage of the mist to concentrate a large force of artillery, and probably anticipated that the British line here was weakened by sending reinforcements to Neuve Chapelle, opened a very heavy cannonade against our trenches in front of the village, as well as against the village itself and the approaches to it. When this was at its height, a mine was exploded under the mound, and immediate advantage was taken by the Germans of the confusion to launch the infantry attack. The whole attack was a surprise to our troops. Both our artillery and infantry opened fire at once, and on the eastern side of the village inflicted very heavy losses upon the advancing Germans. The British artillery was particularly deadly among the German supports; but the enemy's artillery attack (a retort in kind to the British bombardment at Neuve Chapelle) was so overwhelming, and the disorganization caused by the mine explosion was so great, that the defences gave way, and at various points the Germans penetrated the first line of the British entrenchments. This caused a general retirement, since the loss of some trenches exposed those who were standing their ground in others to an enfilading fire. The retirement was made just before dark, and it placed not only the trenches, but a part of the village as well in the assailants' possession.

A counter-attack was then organized. It was undertaken by the 82nd Brigade of the 27th Division (part of Sir Herbert Plumer's V. Army Corps), with the 80th Brigade in support,



ST. ELOI.

and was launched at two in the morning. It was partly successful, for the 82nd Brigade succeeded in recapturing a portion of the village which the Germans had taken, and some of the trenches east of it. An hour later the 80th Brigade retook the rest of the captured part of the village, as well as more trenches, both to the east and west of the village—in fact, practically all which had not been destroyed by bombardment. This counter-attack was carried out under difficult conditions; yet most of the lost ground was recovered, the only material point not recovered being the mound. These brigades contained the same troops which had given way at the first onslaught, and their counter-attack, which was made with great bravery, showed that they had very quickly recovered from it. It was a tribute to their

courage and their discipline, as the fighting in the village was of the fiercest kind. For on taking it in the evening the Germans, whose infantry had been followed closely by pioneers, had promptly fortified themselves by erecting barricades in the streets, on which the inevitable machine guns were mounted. These barricades had to be stormed one by one, and at heavy cost in casualties. The Army Commander specially commended the 2nd Royal Irish Fusiliers, the 2nd Duke of Cornwall's Light Infantry, and 1st Leinster Regiment, the 4th Rifle Brigade, and the Princess Patricia's Light Infantry, which were among the units engaged.

The next day a small force of Germans returned to the attack, but they were nearly all wiped out. On Wednesday, the 17th, the Germans made another and more vigorous attack, but again their efforts failed, and they were repulsed with great loss.

In connexion with this, one pleasing feature relating to the Germans is to be noted. Contrary to their common practice, they refrained, when the next morning search was being made by the British in the houses of the village for wounded, from firing at the bearer parties, notwithstanding that they were within quite close range.

In many respects St. Eloi resembled Neuve Chapelle in the unexpectedness of the attack, on the initial success owing to its suddenness and the ferocity of the preliminary bombardment, in the terrific village fighting, and in the fact that it was an isolated action for piercing the enemy's lines locally, and not part of a general advance. But in one respect it differed; the Germans at St. Eloi surrendered most of the captured ground before the counter-attack; at Neuve Chapelle the British held on, and repelled all attempts to deprive them of the fruits of their victory. St. Eloi may be looked on as the final phase of the Neuve Chapelle operations.

SOLDIERS' GRAVES IN FRANCE.

CHAPTER LXXVI.

THE RUSSIAN OFFENSIVE IN THE CARPATHIANS.

The Position in the Carpathians at the Time of the Fall of Przemysl—Reasons in Favour of a Russian Offensive—Strategical Survey of the Carpathian Battlefields—The District Round Bartfeld—The Lupkow Zone—The Uzsok Zone—The Great Battle for the Carpathian Range—Its Outcome—The Germanic Concentration in Western Galicia—The Pruth District—The Valley of the Dniester—Battles Fought in that District—Early Spring in Poland and in Lithuania—The Russian Raid on Memel—Raids on the Baltic Shore.

APPROXIMATELY six weeks intervened between the fall of Przemysl, on Monday, March 22, and the opening of the great Austro-German offensive in Western Galicia, in the first days of May. The history of these six weeks is that of the battle for the main ridge of the Carpathian Mountains, the crest of which forms the frontier between Galicia and Hungary. Early in the war, in October and even in November, 1914, little importance was attached by either side to the Carpathian front; small detachments of Russian troops were suffered by the Austrians to cross the mountains and to raid the outskirts of the Hungarian plain, and then again on encountering superior forces, were ordered by their own commanders to withdraw without any serious attempt being made at maintaining them in their advanced positions. The first serious offensive across the Carpathians was carried out in December by the Austrians, and was aimed as a thrust against the flank of the Russian armies, which at that time had advanced in Galicia to the very neighbourhood of Cracow. If successful it would have cut the main lines of communication of the Russian armies. It was, however, completely checked by the Russian counter-offensive about the middle of December, and by the New Year the Russians were again in possession of the chief mountain passes leading into Hungary. The second Austro-German offensive, conducted with ever-increasing violence, opened in the Carpathians about January 23. Its main weight was at first directed against the passes to the east of the Uzsok. It constituted again a serious menace to the lines of communication in the rear of the Russian armies, but by the beginning of March, on retaking Stanislawow, our Allies got the situation completely in hand, and of the gains which had at first been attained by the Austrian armies all that was left to them was the Pruth valley, *i.e.*, the Bukovina and the furthest south-eastern corner of Galicia, the district round and south of Kolomea. In Chapter LXIX. we discussed the strategical aspects of that campaign and described its more important battles.

In the first days of March the Germanic armies opened their last and most desperate direct attempt at relieving the fortress of Przemysl. It was carried out with very considerable forces and conducted with great

THE TSAR AT THE FRONT.

decision. The Russians retired before the onslaught from all the passes which they had retained during the second Germanic advance in the Carpathians (January-February), except from that of the Dukla. Their retirement was, however, carried out in perfect order, and when Przemysl fell, the Germanic troops were still a good distance away even from the southern railway line, the so-called Transversal Line. It will be remembered that of this railway, which, starting at Husiatyn, runs through Stanislawow, Stryj, Sambor, Sanok and Gorlice, the Austrians had gained a considerable sector during their advance in the beginning of December, but had lost it again towards the end of the same month.

A new development can be noticed in the Carpathian fighting during the month of March. Formerly the activities of both sides had been limited in the main to the chief passes and their immediate neighbourhood. But gradually, as more and ever more troops were brought up by both sides, the battle-front developed a more continuous character. Each side, bringing up numerous reinforcements, attempted flanking movements against the enemy's positions in the given sector, round the pass, road, or railway. On the Western Front, whilst each side tried to outflank the other, the fighting-line stretched ever farther, until at last the Battle of the Aisne changed into a battle extending from the Swiss mountains to the North Sea. To this process of extending the line in the west corresponds in the Carpathians that of filling out the gaps between the main positions in the western and central sectors of the mountain range; during the month of March the fighting for the passes changes into the battle for the entire ridge from Konieczna to the Uzsok, and even farther to the east, to the Wyszkow Pass. The districts in the immediate neighbourhood of the passes had been developed meantime by both sides into mountain fortresses, well-nigh impregnable to frontal attacks. It was only natural that this should have happened, as in some of the passes fighting had been proceeding since the beginning of February without any considerable changes of position. In certain districts there had been no changes whatsoever. Naturally, therefore, most attempts assumed henceforth the character of turning movements, especially as the improvement in the weather in March facilitated such operations. We do not mean in the least to suggest that even now these movements were in any way easy. No one can suppose that for a moment who has ever been in the Carpathian Mountains in the early spring, or who has had an opportunity to read notes by officers whose task it was to conduct the operations in those districts. The transport of guns and supplies over the mountain slopes still remained a problem the solution of which required ingenuity and common sense, patience and endurance.* But the cold was no longer, as a rule, as intense as it had been during the first battles in the passes, fresh snowfalls were

* At some places the following method was used for transporting the guns up hill: Pulleys were fixed to the strongest trees on the top of the hill. Powerful ropes were led from the guns through the pulleys to the yoke of oxen standing on the hill. Then the oxen were driven down the slope. It is easy to imagine how slow transport is which has to take to such extraordinary devices.

RUSSIAN OFFICERS STUDYING PLANS.

THE TSAR AND THE GRAND DUKE NICHOLAS AT THE FRONT.

RUSSIAN ENGINEERS AT WORK.
Constructing a railway track for transports.

of rare occurrence, whilst the spring weather was not yet sufficiently advanced to interfere seriously with the movements of the troops and with the transport. The Russian commanders decided to make use of that comparatively favourable season in order to regain the command of the Carpathian ridge; ". . . our armies," says the official Russian résumé of the fighting, issued from Headquarters on April 18, " were assigned the task of developing, before the season of bad roads due to melting snows began, our positions in the Carpathians which dominated the outlets into the Hungarian plain."

As soon as the fall of Przemysl had become a certainty, our Allies, without waiting for the actual event, assumed the offensive on the Carpathian front; its beginning may be put at March 19. The conquest of the Carpathian ridge and of its passes was a strategical necessity for them, whatever their plans may have been for the later part of spring and for the coming summer. If an invasion of Hungary was planned, the gates had to be opened before the period of the melting snows reached the mountains; but also, if an offensive against the west was thought of, the southern flank had first to be firmly secured. That security could only be attained by a complete mastery of the Carpathian range. The offensive opened by the Germanic armies in the first days of May checked any further development of the Russian plans; even so, however, the results achieved in the Carpathians in the course of the preceding six weeks were not wasted. It is very doubtful whether the Russian retreat from the Dunajec and the Biala could have been carried out in the way in which it was actually executed, had the Austrians retained their advanced positions in the Central Carpathians, to the south of Przemysl. The line of the mountains had in the initial stages of the Russian retreat the same significance which the line of the Dniester had for them after the San had been reached: it secured the flank of the retreating army, it circumscribed the range of the enemy's movements and limited them to frontal attacks. It ought further to be kept in mind that it was the Russian conquest of the Carpathians which compelled the Germans to direct against the East the forces which they had accumulated and developed in the course of the winter; as events proved, the Allies in the West had all reason to be thankful for having been given a few additional months during which to complete their own preparations. The Russian advance in the Carpathians in the early spring helped us to some extent in the same way as did their advance in East Prussia in September, 1914.

The position in the Carpathians about the middle of March might be described as one of " unstable equilibrium "; the Russians had either to undertake an offensive along the entire line or to give up their last advanced positions in the mountains. Their isolated outpost in Hungary, south of the Dukla, was of no strategical value, unless it was made the beginning of an advance along the entire line.

If left undeveloped, it would have merely exposed the troops which held it to unnecessary dangers. The conditions for an advance in the Carpathians were exceptionally favourable for Russia in the early spring. The Germans themselves ascribe a great measure of their successes to "railway-strategy," to their superiority in heavy artillery, and their more plentiful supply of ammunition. But heavy artillery cannot be employed in mountain fighting, least of all in winter and in the early spring; its transport would present insuperable difficulties. "Railway-strategy" presupposes a choice of fronts; but towards the end of March and in April the condition of the roads and of the ground in Lithuania, Poland, and on the Dunajec was such that the Russians had no need to fear the danger of any surprise attacks from the enemy on these fronts, whilst their main forces were concentrated in the Carpathians. Thus, for once, the Germanic armies were compelled to meet the Russians on a limited front, and that without being able to bring into play their superior heavy artillery.

Many people expected far-reaching results to follow on the fall of Przemysl. These expectations were caused largely by the misuse of historical analogies, torn out of their context, and thus devoid of all perspective. If the garrison of Przemysl, calculated in absolute figures, at least equalled that which had held Metz in 1870, its numerical weight counted for little when compared with the total strength of the Germanic armies. Undoubtedly, for the strategy of the war the importance of Przemysl was very great indeed; but it was due to a much greater extent to its command of the Galician system of roads and railways than to the numbers of Russian troops which its siege withdrew from active operations. With unconquered Przemysl in their rear, the Russian armies could not have ventured to assume a further offensive, either to the west or across the Carpathians into Hungary. A reverse such as that suffered by our Allies on the Biala and Dunajec in the first days of May might have easily changed into a catastrophe had Przemysl continued to bar their main line of communication and retreat. The fall of Przemysl removed a serious obstacle to further operations, but it did not secure for the Russian armies a decisive numerical preponderance.

The entire siege army under General Selivanoff had counted not more than four or five army corps. A considerable part of it was unsuited for mountain fighting. Its artillery consisted chiefly of siege trains. Cavalry played an important part in the siege army, as the wide circumference of Przemysl had necessitated the employment of mobile columns, which could be brought up within short time to any point

AN AUSTRIAN TRANSPORT.
Difficult travelling along a muddy track.

threatened by a sortie from Przemysl. On being transformed into infantry the Russian cavalry lost considerably in value, not merely on account of differences in training, but still more because of deficiencies in armament and equipment. "In the Carpathians," says the Russian official *communiqué* of April 17, "the regiments of several divisions of cavalry have transferred their horses to the artillery, and have been converted into infantry. These cavalrymen have no bayonets, which is an appreciable handicap, as the greater part of the fighting is hand-to-hand."

Thus the addition which the siege army of Przemysl made to the Russian armies operating in the Carpathians was even smaller than its mere numbers would imply. We have no means of calculating with any degree of exactitude the strength of the Germanic armies which at that time held the Carpathian range, but big forces had been concentrated in Northern Hungary during the two months preceding the fall of Przemysl; they were meant to hack their way through to the relief of the fortress. Their aggregate strength in Galicia amounted in all probability to about 20 army corps, and in the beginning of March their numbers were probably superior to those of the opposing Russian armies under

GENERAL BOROJEVIC VON BOJNA,
Commander of the Second Austrian Army.

GENERAL VON LINSINGEN,
Commander of the German Army in the district East of the Uzsok.

Generals Ivanoff, Radko Dmitrieff and Brusiloff. The Germanic forces on the Carpathian front were divided into five armies. The line of the Dunajec, and the Biala, and the foot-hills of the Carpathians were held by the Fourth Austrian Army, under Archduke Joseph Ferdinand; it consisted of at least two and a half Austrian army corps and one German division. Next to it, on its right flank, stood the Third Austrian Army, under General von Boehm-Ermolli; the Second Austrian Army, under General Borojevic von Bojna, operated in the region of the Central Carpathians, and the German Army, under General von Linsingen, in the district east of the Uzsok. The upper valleys of the Bystrzycas and the valley of the Pruth were held by the Austrian troops of General Baron von Pflanzer-Baltin. Behind these armies stood immense reserves, which could be directed against any point threatened by the Russian advance. New German formations had made their appearance in February and March in East Prussia and in the Carpathians; they could be used more easily now that the fighting had to a considerable extent assumed a defensive and stationary character. However arduous and difficult trench warfare may be, especially in mountains, yet it hardly tries the endurance of the troops and the skill

GENERAL BARON VON PFLANZER-BALTIN,
Who commanded the Austrian troops in the Valley of the Pruth.

and leadership of the officers to the same extent as a vigorous and successful offensive, attended by pitched battles and forced marches.

As soon as the approaching fall of Przemysl opened the possibility of a Russian offensive in the Carpathians, fresh German reinforcements began to pour into Northern Hungary. The land of the Magyars had to be defended at any price, even more for political than for strategical reasons. The one thing which seemed sacred to the Germanic Allies in this world-war was the soil and homesteads of the two dominant races, of the Prussians and of the Magyars. It mattered less to the Governments of Berlin, Vienna or Budapest if the lands of other Austrian nationalities had to suffer. Galician refugees were given the cold shoulder by the Germans of Vienna, and were expelled from Hungary in a merciless way*; the homes of the Italians in the Trentino were destroyed by the Germanic armies "for strategic reasons." But the master-races, the Prussians and the Magyars, became hysterical if an enemy soldier set foot on their soil.

Major Moraht, the well-known military correspondent of the *Berliner Tageblatt*, discusses the political aspect of the Carpathian fighting in a dispatch published on March 30. He does it, naturally, in a rather guarded manner, though one can easily grasp the full meaning of his words. "In the case of Russia," says he, "political reasons constitute a contributing motive in the choice of this battle-zone for a decisive action. The thoughts of a part of the educated classes in Hungary move, as I could ascertain, in this direction, and the Vienna Press expresses the same idea. There is sufficient reason for the supreme army command to oppose the advance of the Russians into the Hungarian plain with all the forces at its disposal." The *Pesti Hirlap*, a prominent Hungarian newspaper, in an article published early in April, discusses the same question in a much blunter way. "Hungary must not be sacrificed to Austria," says its leading article, "and Hungarian interests must be primarily considered in dealing with the situation arising out of the Russian invasion of our territory." About the same time, a Hungarian correspondent of *The Times* stated that public opinion in Budapest was unanimous in saying: "We

GENERAL VON BOEHM-ERMOLLI,
Commander of the Third Austrian Army.

* The Czechs in Bohemia and Moravia alone received with cordiality the Galician refugees.

AUSTRIAN TROOPS ADVANCING IN THE CARPATHIANS.

shall play the game as long as the fighting is being carried on beyond our frontiers."

On March 19 practically the entire battle-front in the Carpathians still occupied the northern, *i.e.*, the Galician, side of the mountains. These slopes were now to become the main battle area. A difference, which is of the utmost importance from the strategic point of view, exists between the configuration of the northern slopes of the Central Carpathians on the one hand and that of the mountains to the west of the Gorlice-Bartfeld line, to the east of the Uzsok, and even that of their own southern slopes on the other hand*. Whilst in all these other zones the rivers cut their way through narrow valleys running due north or south, the valleys of most of the rivers and streams on the northern side in the central zone, between the Dukla and the Uzsok, run in their upper reaches parallel to the main mountain ridge. Thus, whilst the other zones of the Carpathians present on a relief map the appearance of huge blocks separated from one another by narrow river valleys, which run at right-angles to the main ridge, fairly wide parallel valleys are the main feature on the northern side of the central zone, with mountain ranges, like enormous trench parapets, following closely on one another. This configuration, taken together with the fact that the elevation of these mountains is considerably lower than that of the sectors to the west and to the east of them, still further favours the development in that zone of a more continuous battle front along and across the entire range. The lower elevation of the mountains and the more irregular course of the rivers exercise also a considerable influence on the net of roads in that zone. The roads in it, except where they cross the highest ridge, do not run in parallel directions to the same degree as do the eastern roads, but form more varied patterns; they thereby offer greater scope for attempts at enveloping or forcing individual positions from neighbouring sections.

A straight line drawn from the junction of the Vistula and the Dunajec to Bartfeld, in Northern Hungary, follows the main direction of the Dunajec and of its tributary river Biala, till about the village of Ciezkowice, which was to reach world-fame during the German offensive in the first days of May. The Dunajec and Biala had been the western front of the Russian positions in Galicia ever since their retreat from before Cracow, about the middle of December. Some 12 miles south of Ciezkowice, on the high-road which leads from Novy Sacz by Grybow to Gorlice, our imaginary

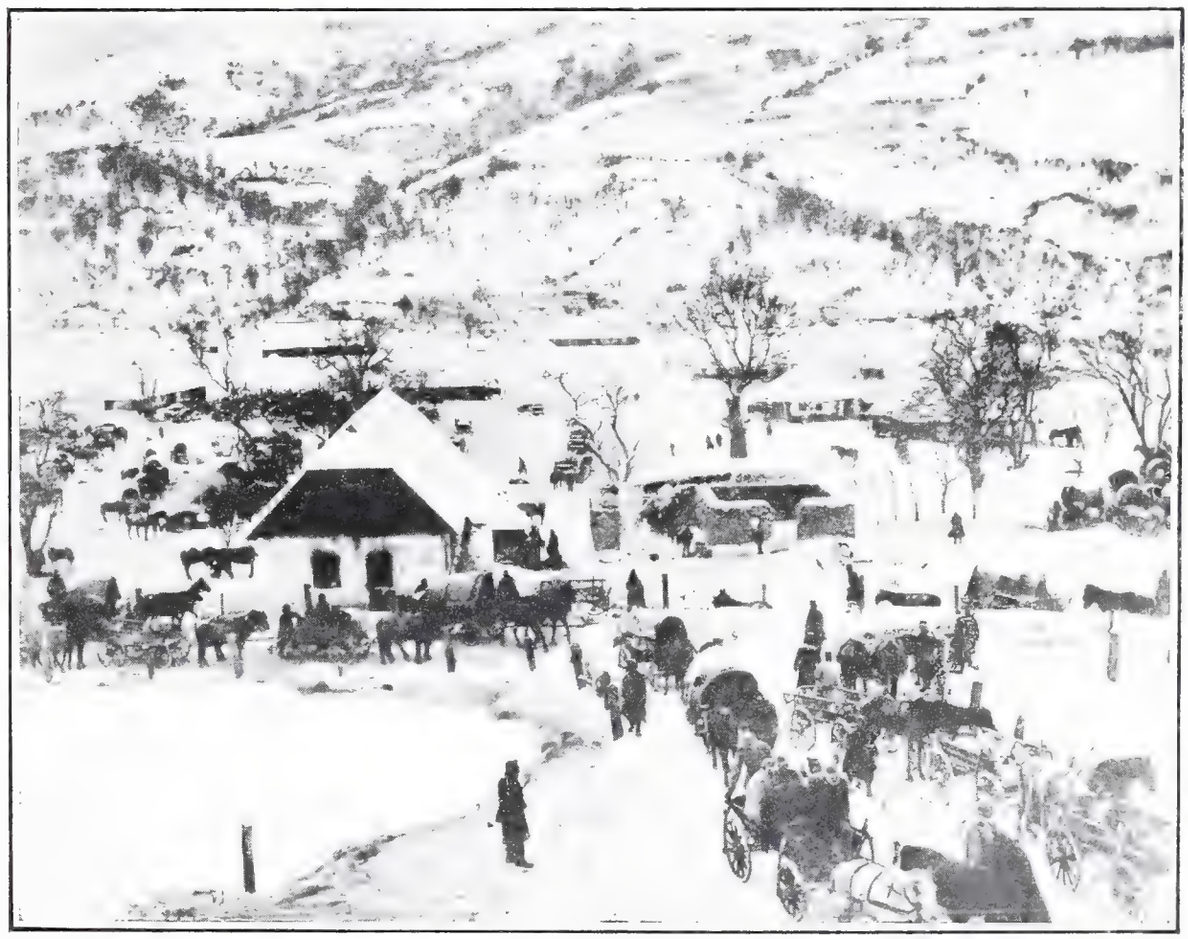
* It is, upon the whole, preferable to describe the different zones of the Carpathian Mountains by their geographical position rather than by their local names. These local names are, however, the only popular designations of the Carpathian mountain-range. Its inhabitants *nowhere* call it by the name of Carpathians; this is now a purely literary, geographical name. Its origin is by no means certain. It is to be found as early as in the second century after Christ in the writings of Ptolemæus. Some historians and philologists ascribe to it a Celtic origin: *carp* or *crap* means rock, *aith* stands for high; hence Carpathians means "high rocks." Others derive the name from the Slav root of "chrb," which in different variations stands for mountain, ridge, or hump. The original name of the country round Cracow was Chorbacya, which corresponds to the Southern Slav name of Croatia, and means "hilly country."

Dunajec-Bartfeld line touches a village called Ropa *; past the south-eastern flank of the village flows a mountain stream bearing the same name as the place. It forms here an angle; down to the village it flows almost due north, following exactly the Bartfeld-Dunajec line; below Ropa it turns more and more in an easterly direction, forming part of the great composite "transversal valley." † From the village of Ropa a secondary road leads to the south, following closely the river Ropa up to the village of Wysowa; the road reaches at that point a height of about 1,700 feet. It forks at Wysowa. Its eastern branch runs through mountain gorges, between heights covered with thick woods; about five miles south-east of the point at which it crosses the crest of the Carpathians it reaches the Hungarian town of Zboro. The western branch of the road from Ropa crosses the range at a height of about 2,300 feet, in a south-westerly direction, and descends over a steep slope to the village of Cigielka (1,700 feet). When the Russians were crossing the Carpathians towards the end of March the upper parts of these heights were still covered with heavy snow; on the southern, Hungarian, side the line of snow reached down to a level of about 2,300 feet; on the northern side it descended much lower into the valleys.

From the southern slopes of the mountain Cigielka, which forms the western side of the pass crossed by the road from Ropa, springs a small stream bearing the same name as the mountain. At the foot of the steep mountain slope lies a village, also called Cigielka. From here the stream cuts its way between rocks and mountains exceeding 3,000 feet in height (the Bilyj Kamien and the Buszow), until it enters, about three miles to the south-west of the village Cigielka, a somewhat wider valley. At this point our road, which follows the stream Cigielka, reaches the village of Pitrova; in that village it joins the secondary road leading

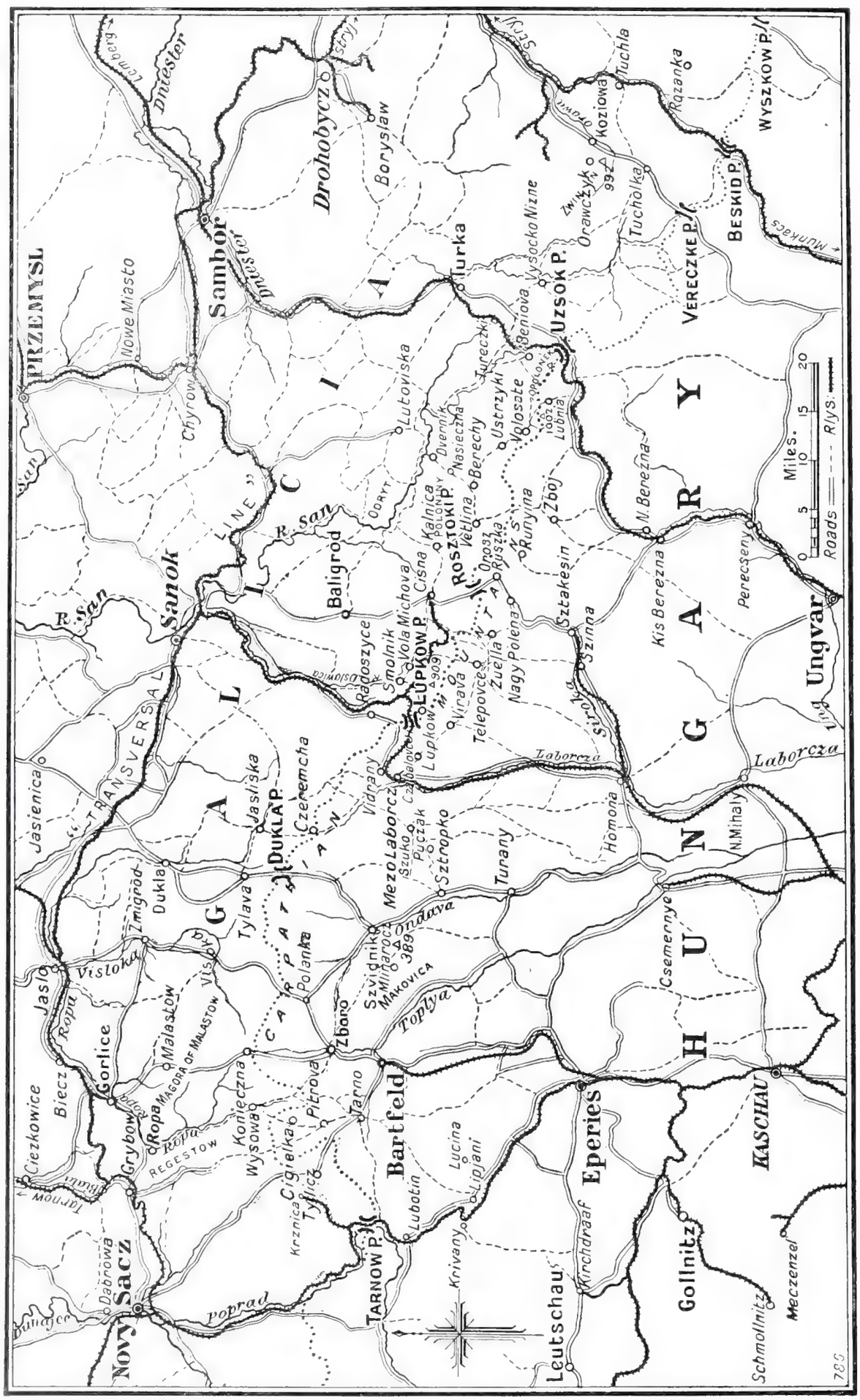
* Ropa means in Slav languages mineral oil; the region of the Carpathian oil-wells extends as far west as Novy Sacz.

† We call by this name the great depression along the northern slope of the Carpathians through which runs the Transversal Railway. This depression is composed of the upper valleys of several rivers.



THE AUSTRIANS IN THE CARPATHIANS.

A scene in the mountains, showing the difficulties with which the transport had to contend, and the nature of the ground the Austrian Army had to negotiate when retreating before the Russians.



THE CARPATHIAN PASSES.

from Grybow by Tarno to Bartfeld. Pitrova lies in a small valley that resembles to some extent the small, forlorn Welsh valleys. It cuts into the main range and is surrounded from three sides by high slopes, strewn with rocks; they look like fields of battles fought between mountain giants, in which rocks supplied the fighters with plentiful ammunition. Looking up the slope which shuts off the valley from the south-west, we see on the top of the ridge, at a distance of more than 3,000 yards, and at a height of over 800 feet above the village, the serpentines of a high-road. It is the important strategic road from Novy Sacz to Bartfeld, which at this point crosses the Carpathian range and runs from here to the south-east, over a long slope, until it meets the Grybow-Pitrova-Bartfeld road at Tarno.*

The Dunajec-Biala-Ropa line formed from December till May roughly the boundary between the Russian and the Germanic armies. The Grybow-Tarno and Novy Sacz-Tarno-Bartfeld roads were the basic lines of communication behind the positions of the Germanic armies in this sector, south of the Transversal Railway. Moreover, the road leading from Novy Sacz to Bartfeld formed the one direct link between the Germanic positions in Western Galicia, in front of the Brzesko-Novy Sacz line, and their positions in Northern Hungary, in the Bartfeld region.

Let us now return to the district of Ropa, and to the high-road that leads from Novy Sacz by Grybow, Gorlice, and Biecz to Jaslo. So much fighting had taken place on this line, even before the great battle of May, that hardly anything was left of the town of Gorlice. "In the whole town," writes a Polish eye-witness in March, "only five or six houses are left fit to be inhabited; the rest are ruined or shot to pieces. Of the parish church only the northern wall remains . . . the vicarage, however, remained intact. . . . During the late battles hundreds of civilians have been killed or wounded; many have died of typhus and other epidemics." No wonder; they have lived underground and fed on raw beetroot or cabbage. Only during recent weeks, as the battle is moving away to the west, have they dared to emerge from their holes, "and many Russian soldiers have—it must be acknowledged—shared with them their rations."

But now—we are speaking of March 19, the time of the beginning of the Russian offensive in the Carpathians—Biecz and Gorlice are in the hands of our Allies. From the village of Ropa till Jaslo, which is one of the most important junctions of roads and railways in Western Galicia, the high road runs through the lower valley of the Ropa. At Jaslo the Ropa joins the River Visloka. These two rivers have their sources close together in the mountains, on the opposite sides of the ridge of Konieczna, but then draw apart until the distance between them amounts to almost twenty miles; converging farther on, they meet at Jaslo.

In the circle thus formed by the two rivers lies a mountain group, isolated almost from all sides, and called the Magora * of Malastow; its configuration resembles in certain ways

RUSSIANS IN THE CARPATHIANS.
A patrol of motor scouts.

that of the Malvern Hills. Rising to the height of 2,778 ft., the Magora of Malastow overtowers the surrounding heights. To the east of it extends the depression of the Dukla Pass; no point in that region exceeds the level of 2,400 ft. The strategical importance of the Magora can be easily seen on the map; stretching from north-west to south-east, it forms the key-stone between the line of the Dunajec and Biala and the main Carpathian range—*i.e.*, between the western and the

* Not to be confused with the town of Tarnow in Western Galicia.

* Magora is the name of some 50 different heights and mountains in the frontier region between Hungary and the Polish and Ruthenian districts. The older form is "Magiera," and is derived from the name Magyar; the connection between the two is too complicated to be explained here. Nor did the people inhabiting these mountains remember or understand it, and it assimilated the ending of the name to the word "gora," which in all Slav languages means "mountain."

AUSTRIAN AMMUNITION TRANSPORT PASSING ALONG A SNOW-COVERED PASS IN THE CARPATHIANS.

southern front of the positions which the Russians had held since the end of December. On the western heights of the Magora were situated in March and April some of their most important lines of trenches.

Across the centre of the Magora leads the high-road from Gorlice to Bartfeld. It rises by serpentines and runs to the south across the ridge, which forms the watershed between the Ropa and the Visloka; this ridge links up the Magora with the main frontier-range. The road reaches its highest level (1,834 ft.) on the frontier between Galicia and Hungary at the end of the long row of homesteads which form the village of Konieczna. Surrounded frequently by strong stone walls, homesteads are in these mountain regions, in which the transport and handling of artillery present serious difficulties, of considerable tactical importance. South of Konieczna, on the Hungarian side, the road descends at a fairly steep gradient to the old historic town of Zboro, the seat of the Counts Erdödy. It is that town which, on account of its beautiful lime trees, appears in some documents from the time of the great Magyar leader and foe of the Hapsburgs, George Rakoczy, as "Zborovia sub centum tiliis." Five miles to the south of it lies Bartfeld, the centre of one of the biggest and oldest German settlements in Eastern Europe. Since railways have been built across the Carpathians the old Tarnow-Gorlice-Bartfeld road has lost most of its economic importance, but hardly any of its strategic significance. The district round the Magora and the Makovica (south-east of Bartfeld) was in the autumn of 1911 the scene of the great Austro-Hungarian army manœuvres; in the course of those manœuvres the invasion of Hungary was checked in a way similar to that adopted by the Germanic armies in the May of this year. During those manœuvres the invading army was commanded by Archduke Frederic, who was now chief-in-command of the Germanic armies in the Carpathians and in Western Galicia.

About six miles east of Konieczna a high road from Jaslo, skirting the eastern flank of the Magora of Malastow, crosses the main Carpathian range—*i.e.*, the frontier between Galicia and Hungary. It descends by two huge serpentines from the crest of the ridge to the village of Polanka; here it splits into two roads, one running in a south-westerly direction to Zboro and Bartfeld, the other in a south-easterly direction to the village of

Szvidnik. This eastern branch meets at Szvidnik the famous old high-road that crosses the Dukla Pass. To get a clear view of this system of roads—and that is indispensable if we wish to understand the Russian offensive in the direction of Bartfeld—let us consider once more their relation to one another. The three roads east of the River Ropa—Gorlice-Konieczna-Bartfeld, Jaslo-Polanka, and Dukla-Sztropko—run in more or less parallel directions from north to south, but the middle road forks at Polanka; its western branch reaches the Gorlice-Bartfeld road at Zboro, its eastern branch joins the Dukla road at Szvidnik. Thus in their lower reaches these roads form two triangles. In the eastern triangle stood on March 19 the only Russian outpost on Hungarian soil. "At the beginning of March (Old Style), in the principal chain of the Carpathians," says a dispatch published by the Russian Headquarters on April 18, "we only held the region of the Dukla Pass, where our lines formed an exterior angle. All the other passes—Lupkow and farther east—were in the hands of the enemy."

The Dukla road follows south of Szvidnik the wide valley of the Ondava. Parallel to it opens to the south-east of Bartfeld the still wider and more open valley of the Toplya. Between the two lies the mountain range of the Makovica, which during the Austrian army manœuvres of 1912 formed, as it were, the centre of the force defending Hungary. The Makovica mountain range lies between the Bartfeld-Kaschau and the Sanok-Mezo Laborcz-Homona railways (the latter, as will be remembered, crosses the Carpathian range through the much-contested Lupkow Pass). We may consider the Dukla road the border-line between the Bartfeld zone and the district centring round the Lupkow Pass; beyond the latter lies the region of the Uzsok. These three zones together form the main theatre of the Russian offensive in the Carpathians, with which we are dealing in this chapter.

The Dukla lies in a depression of the Carpathian range, which is caused through the meeting of two mountain folds, running in different directions. East of the Dukla begins, with the height of the Czeremcha, a mountain range which presents up to the Uzsok one continuous line, and is marked by certain distinct peculiarities. It stretches in an east-south-easterly direction and increases in height and breadth as we advance from west to east. Along the entire line its highest ridge forms the frontier between Galicia and Hungary. Round the Lupkow its height varies between 2,300 and

RUSSIANS ON THE BATTLEFIELD.
A hasty meal.

FIGHTING THE MUD IN WESTERN GALICIA.

An Austrian gun detachment negotiating a shallow tributary on the Dunajec.

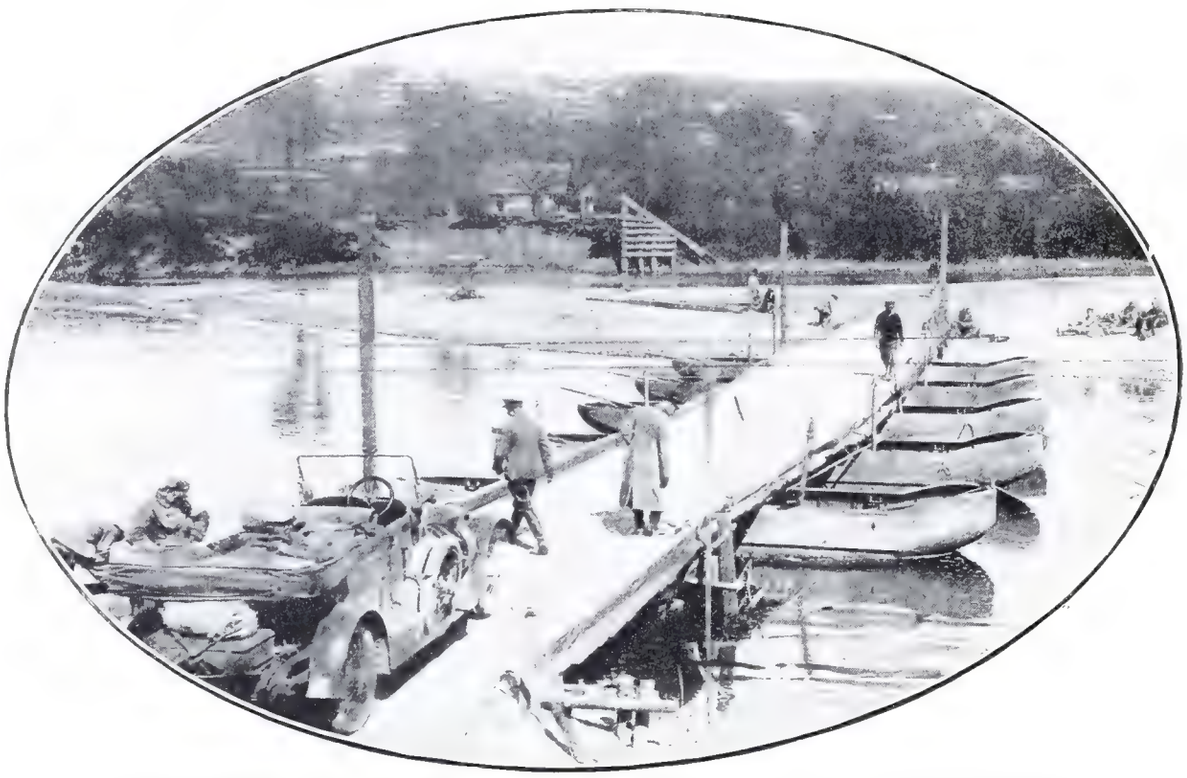
3,000 ft.; round the Uzsok it rises to about 4,300 ft., and the Uzsok Pass itself attains a height almost equal to the elevation of the highest peaks in the Lupkow district. As we stated above, valleys running parallel to the mountain range are an important feature along the northern slopes between the Dukla and the Uzsok.

A secondary road parallel to the range runs from Tylava, a village situated on the Dukla road, to the north of the pass, in an easterly direction. About four miles east of Tylava, at the crossing of that road with another one coming from the north, lies a village called Jasliska. That village has grown out of a German settlement which had been founded in 1367; its original name was Hohenstadt (the High Town). Already in the Middle Ages it was considered an important strategic point, as can be seen from the remainders of its powerful walls, which survive to the present day. From our point of view, its importance consists in that two secondary roads lead from it across the Carpathian crest into the valley of the Laborcza. They join at Vidrany and at Mezo-Laborcz the road and railway line which connect Sanok with Homona. The railway crosses the main range through a tunnel near Lupkow; the road climbs over the crest south of Radoszyce. These points are ground over which the battle had raged for many months, and the Germanic armies have a firm hold on them. But Vidrany and Mezo-Laborcz lie in the rear of these positions; they can be turned from Jasliska.

We cannot speak of a pass in the Lupkow in the same way as we do of a pass in the Dukla or the Uzsok. It is a region favouring communication across the mountain range rather than a single pass. Two rivers—in the north the Oslawica, a tributary of the San, and in the south the Laborcza, a tributary of the Tisza—open convenient avenues for roads and railways into the plains of Poland and Hungary. Between their upper courses lies a short sector of the Carpathian range, running from north to south; the sources of the Oslawica lie some 10 miles to the east of those of the Laborcza. Hence both the road and the railway which connect these two valleys form a big curve and for about eight miles run from east to west. The farthest western point, round Vidrany and Mezo-Laborcz, can be reached fairly easily from the north, from Jasliska. But although the Sanok-Homona railway can be threatened from the west of Lupkow, the real conquest of that region must be undertaken from the east. Look at the map. Two high roads connect Sanok with Homona; the western road leads by Radoszyce and Mezo-Laborcz, following in the main the direction of the railway line, and running, on the Hungarian side, through the valley of the Laborcza. The eastern road leads by Baligrod and Cisna, through the Rozstoki Pass, to Orosz-Ruszka and Nagy-Polena, and from there through the valley of the Siroka* to Homona. From Sztakesin to Homona runs a branch railway of the Sanok-Homona line. Now we have to add one more detail and our picture will be complete. From Lupkow, a station on the Sanok-Homona railway line, opens to the east, along the northern slope of the mountain range, one of those parallel valleys about which we have spoken above. That valley, or rather depression, runs from Lupkow by Smolnik, Vola Michowa and Cisna to Kalnica; each of these small mountain hamlets is by now an historic name, equal to Neuve Chapelle, Festubert, or Souchez. From Lupkow to Cisna runs a branch railway of the Sanok-Homona line; Cisna, on the Baligrod-Rozstoki road is its terminus. Thus we get a perfect triangle, with its base between Mezo-Laborcz and Cisna and its apex at Homona. About the middle of March the Germanic troops held positions almost in front of Baligrod. The Russian offensive will have first to press them back from the ridge north of the Lupkow-Cisna line (about 3,000 feet high); then to conquer that valley as a base for its further operations; after that, to force the crossing of the main Carpathian range, to Virava, Telepovce, Zuella, and Nagy Polena. Converging roads lead from these places to the apex of the triangle at Homona, the Holy Land which our Allies were destined to sight, but not to enter.

The road from Baligrod forks at Sztakesin; whilst its western branch leads to Homona, its eastern branch reaches at Berezna the Sambor-Uzsok-Ungvar railway line. The Austrians have constructed a veritable mountain-fortress in the fastnesses of the Uzsok Pass. But should the Russians reach Berezna, the entire army in the Uzsok region would have to surrender or to attempt an "anabasis" across the high mountains, to the south-east of the Uzsok.

* Siroka is probably a corruption of the Slav word for wide, broad; the river flows through a fairly wide valley.



GERMANS CONSTRUCTING A PONTOON BRIDGE IN GALICIA.

In the region to the west of the Uzsok the lines of communication form a triangle similar to that east of the Lupkow. Its basis is the Baligrod-Tureczki road leading through the parallel valley, which is formed on the northern slope of the Carpathians by the course of the upper San; the Baligrod-Berezna high road forms its western, and the Uzsok railway its eastern side. But the net of roads inside of the triangle differs from that in the Lupkow. The roads do not converge towards the apex of the triangle, but run more or less parallel to the western side, reaching the Sambor-Ungvar railway at different points between the Uzsok and Berezna. By whichever road the invading force succeeds in reaching it, the positions in the Uzsok are turned. But it is not an easy task to advance along these roads; they lead over mountains that are considerably higher than those in the Lupkow district; some of them exceed 4,300 feet in height.

About the middle of March the battle has not even yet reached the San valley; it is fought in the mountains of the Odryt (its highest point attains the level of almost 2,800 feet). The first move will be an advance into the San valley; then our Allies will have to force their way across the range which, in the western sector between Dvernik and Berechy and Vetlina, bears the name of Poloniny. After they have reached the Berechy-Volosate line, there is only one more range between them and Hungary. They will cross it in the west, round Runyina and in the extreme east, where a distance of only a few miles intervenes between Volosate and Sztarina, which lies in the rear of the Uzsok Pass; here they will reach the positions of Lubnia, almost half-way between Volosate and the Uzsok railway. And again, similarly as in front of Homona, their work is not destined to reach its right conclusion.

East of the Uzsok the mountains rise considerably in height, and there are fewer convenient roads leading across them than in the west. Twenty-five miles east of the Uzsok lies the Vereczke Pass, and about five miles farther east the Beskid Pass; through the latter leads the Stryj-Munkacs railway line. The battle line between the Uzsok and the Vereczke runs, about the middle of March, from Turka along the upper Stryj, south of the Zwinin range, and then south of Orawczyk and Koziowa, by Tuchla and Rozanka to Wyszkow. This line has been held by the Russians ever since the beginning of February; whole German battalions had perished in vain attempts to force it. General von Linsingen will continue his attempts in March and April; still we shall hear but little important news from that region. "Between the Lupkow and Uzsok," says the dispatch from Russian Headquarters of April 18, ". . . our grand attack was planned." The two triangles between the passes are its battle-field.

East of Wyszkow rise mighty, roadless mountains, five to six thousand feet high. There is a gap in the fighting line which never was or needed to be filled. There was no danger to either side of its positions being turned from this direction. The region of the upper Bystrycas and the Pruth valley we may treat as a separate theatre of war. Here the Austrian troops under Baron von Pflanzer-Baltin had broken through in January, by way of the Jablonica and the Kirlibaba; they had reconquered the Bukovina, the Pokucie, and even reached Stanislawow. Expelled from that town in the first days of March, they had fallen back on a line leading from Nadvorna by Ottynia to Niezwiska on the Dniester. It follows approximately the watershed between the Pruth and the Dniester; the right bank of the latter river is higher than most of the surrounding country, and thus the Dniester receives practically no tributaries from the south. North of the Nadvorna-Niezwiska line stretches a fertile plain, watered by innumerable streams, which flow down from the high mountains in the south. In April the valley between Nadvorna and Ottynia is flooded, and thus no fighting on any considerable scale is then possible in that region. Only farther to the east, on the high ground on the Dniester, did severe fighting continue throughout the early spring.

"About the period indicated" (the middle of March), says the dispatch of the Russian Headquarters, dated April 18, "great Austrian forces, which had been concentrated for the purpose of relieving Przemysl, were in position between the Lupkow and Uzsok Passes. It was for this sector that our grand attack was planned. Our troops had to carry out a frontal attack under very difficult conditions of terrain. To facilitate their attack, therefore, an auxiliary attack was decided upon on a front in the direction of Bartfeld as far as the Lupkow. This secondary attack was opened on March 19 and was completely developed."

The reader will have marked in the previous detailed description of the western region that the roads spread like a fan to the north of Bartfeld. The two western roads (Novy Sacz-Tarno and Grybow-Pitrova-Tarno) were on March 19 in Austrian hands, the northern sectors of the two eastern roads (Gorlice-Zboro and Jaslo-Zboro), but not their junction at Zboro, were in the hands of our Allies. The road along the Ropa seems to have lain at that time in the sphere of the strategical "no man's land." Could the Russians have

RUSSIAN GUNNERS HAVE AN IMPROMPTU LUNCH.

AFTER A BLIZZARD IN THE CARPATHIANS.

Russian troops cutting a path through the snow for their artillery, under fire from the Austrian guns.

gained possession of the two junctions of Tarno and Zboro, all roads approaching Bartfeld from the west, north and east would have been in their hands; only the valley, leading due south, through which run the railway and high-road to Eperies and Kaschau, would have remained open to the Austrians. But it was possible for the Russians to threaten even that line from the flank by an advance along the Szvidnik-Sztropko-Turany road (it will be remembered that the triangle of Szvidnik was in the possession of our Allies). An offensive in force along this road presented yet another advantage: whilst supporting the "auxiliary attack" against Bartfeld, it also constituted an advance against the flank of the Sanok-Homona line, south of Mezo-Laborcz. These were the main outlines of the Russian offensive, in so far as it depended on the topography of that region; it is to be regretted that the *communiqués*, which are written mainly for people unacquainted with the geographical detail of that country, give us only occasionally and in a casual way the details of the fighting which actually took place and of the advance of our Allies. In most cases they refer merely in general terms to the regions in which the fighting proceeded without mentioning separate localities.

In the very first days of their offensive the Russians forced their way across the Carpathian range to the north of Zboro. We do not know the exact day on which they entered that town, but we are told incidentally of their being there on March 26. We also hear that before evacuating it the Austrian troops set fire to that interesting old place. The Russian advance on Zboro bore fruit; Archduke Frederic concentrated considerable forces in the Bartfeld region, and when, after March 24, the main battle developed chiefly in the Lupkow-Uzsok region he had to try a counter-offensive from Bartfeld in order to relieve the pressure brought on those of his troops which held the line farther east; that attempt failed completely. The Russians had by that time gained a firm footing on the Hungarian side, north of Bartfeld, and no frontal Austrian attacks were able to dislodge them. The Russian offensive even developed still farther, along the Szvidnik-Sztropko road and to the east of it—*i.e.*, on the south-eastern flank of the Bartfeld position. The official Petrograd *communiqué* announces that on March 26, in a bayonet fight for the possession of Height 389, east of the village of Mlinarocz, our Allies destroyed three Austrian battalions. Height 389 lies south-west of the Makowica; the Russian advance across it threatened to turn the Austrian positions in that zone. On March 30 we hear again of severe fighting to the north of Sztropko. On April 2 we hear of the Russians taking the village of Cigielka. We are not told whether they ever got beyond it, towards Pitrova, or whether they were stopped in the gorge through which leads the road from Cigielka. We hear that the Austrians were working

WATCHING A BATTLE.
Austrian Chiefs of Staff in the Carpathians.

feverishly at the fortifying of new positions north of Bartfeld. The exact position of these lines we cannot, of course, as yet hope to know, but the Bilyj-Kamien-Buszów line seems to be the natural gate for the defence of the valley of Pitrova.

The Austrians had to take all possible precautions for the safety of the Bartfeld-Eperies railway line (Bartfeld is its northern terminus). The Novy Sacz-Eperies-Kaschau railway, of which the former is a branch line, is the only line connecting Western Galicia with Northern Hungary, and five miles south of Eperies it joins that leading from Berlin by Breslau,

THE AUSTRIAN 30·5 CM. GUN IN THE CARPATHIANS.

Oderberg and Kaschau to Budapest, which is the chief strategic railway connecting Germany with Hungary. The approach to the Novy Sacz-Eperies line from the north-east is comparatively easiest in the region between Cigielka and Tylicz and from the south-east of Bartfeld. Hence the Germanic armies had to keep a good watch over, and offer a vigorous resistance to, any further Russian advance from Cigielka and Mlinarocz. This explains the nature and success of the auxiliary attack against Bartfeld, which, as a matter of fact, was never meant to be followed out to a decisive result. There are obvious objections to the main attack being directed against a narrow and difficult front when the time for developing it is limited by the impending change of the season and the consequent changes in the general condition of other parts of the same theatre of war. In addition, the main advance could hardly have been undertaken at the extreme end of the Galician line, as if it were from the corner of the Russian positions. The Russian force which invaded Hungary through the Dukla and to the west of it certainly never consisted of more than two corps of the Eighth Army, and in all probability never even attained that strength. Yet the threat implied in this auxiliary attack was bound to contain considerable numbers of the enemy's forces in that region, especially as for once the Russians had better lateral communications at their disposal than the opposing Germanic armies. The Transversal Railway runs parallel to the Carpathian range at a distance of about 20 miles north of its crest. As we have stated before, there are no similar parallel valleys on the Hungarian side, and the nearest lateral railway runs between 40 and 50 miles south of the crest.

In spite of the desperate Austrian counter-attacks, we hear in April of fresh Russian successes in the valley of Ondava and of the further advance of our Allies through that valley in a southerly direction—*i.e.*, along the Szvidnik-Sztropko road. By April 4 they had reached the town of Sztropko. Two days later they were extending their gains to the east in the direction of the Mezo-Laborcz railway line. On April 6 they gained possession in that district of the small village of Puczak. At the same date we hear of severe fighting and of further progress in the valley of the Toplya. It seems that this time we are dealing not merely with an advance to the south of Zboro, but also with a flanking movement directed from the east against that valley; we are, however, unable as yet to ascertain these details. On April 11 and 12 the fighting extends to the south of Sztropko.

After April 12 we hear hardly anything more about the Russian offensive in the region of Bartfeld. Their offensive in that district had achieved its principal aim, the advance in the Ondava valley had even outpaced the concurrent movements farther east. About the middle of April the first stage of the offensive in the Carpathians comes to a close along the entire line for reasons which we shall discuss when dealing with the main operations between the Lupkow and the Uzsok. It was not to be resumed. About April 20 rumours begin to spread again of an impending Germanic offensive in Western Galicia, on the Tuchów-Gorlice line. The blow is struck on May 2 and 3. Its success threatens to cut off the retreat of the Russian troops in the Bartfeld district, and on the following day the Russians begin to retreat from the Hungarian slopes of the Carpathian Mountains.

We return meantime to the main Russian offensive in the Central Carpathians.

On March 23 the Russian troops "had already begun their principal attack in the direction of Baligrod," says the dispatch from Headquarters of April 18, "enveloping the enemy positions from the west of the Lupkow Pass and on the east, near the sources of the San. The enemy opposed the most desperate resistance to the offensive of our troops. They had brought up every available man on the front from the direction of Bartfeld as far as the Uzsok Pass, including even German troops and numerous cavalrymen fighting on foot. The effectives on this front exceeded 300 battalions. Moreover, our troops had to overcome great natural difficulties at every step."

The very first day of the general battle is marked by heavy fighting and signal successes. "In course of the day," says the Russian official *communiqué* dealing with March 23, "we captured more than 4,000 prisoners, a gun, and several dozen machine-guns." During the next day the battle continues; especially severe is the fighting for the crest of the mountain south of Jasliska and to the west of the Lupkow Pass. The forests which cover these mountains offer special facilities for the construction of strong fortifications. The woods in the Lupkow region, says the Russian *com-*

MEN OF THE FONGORIJSKI REGIMENT EXAMINING MACHINE GUNS CAPTURED FROM THE GERMANS.

muniqué of March 25, "are a perfect entanglement of barbed wire . . . surrounded by several layers of trenches, strengthened by deep ditches and palisades." Nevertheless, on March 25 the Russian troops "carried by assault a very important Austrian position on the great crest of the Beskid Mountains," capturing during the day about 100 officers, 5,600 men and numerous machine-guns. The position in the Laborcza valley is of the utmost importance for the Germanic armies, and they have to guard against being taken in the flank by the Russian advance from the direction of Jasliska. They receive strong reinforcements on March 25. The battle continues on the entire front, and does not abate in violence until the night of March 27. During these days our Allies achieved considerable successes, especially along the Baligrod-Cisna road and south of the Upper San; they got along this front within seven miles of the Hungarian frontier. They captured, moreover, during the fighting between March 20 and 28 more than 9,000 of the enemy.

With renewed violence the fighting recommenced along the entire line from the Dukla to the Uzsok on the night of March 28-29. It continued during the whole of the following day; a considerable advance was achieved by our Allies in that battle all round the Lupkow. The captures made in the course of that day included 76 officers, 5,384 men, 5 guns, 21 machine-guns, and 1 trench-mortar. Fighting on the Baligrod-Cisna road continued during the night from March 29 to 30. Marked progress was made south of Lutoviska, in the directions of Dvernik and of Ustrzyki. On the next day this movement, which threatened to envelop from the west the Austrian position in the Uzsok and to cut off its lines of communication to the south, was carried on still farther. Severe fighting, in deep snow, developed between Dvernik and Nasieczna. The day ended with the record capture of 80 Austrian officers, 5,600 men, 14 machine-guns and 4 guns. The Austrians ascribe their ill-success of these days to the arrival in the districts of Dvernik and Ustrzyki of divisions from the late siege army of Przemysl, but do not mention the heavy German reinforcements which were streaming in all the time into the Uzsok region from their base at Ungvar. The Russian advance in this district seemed irresistible. During the day

of March 31 and the following night our Allies carried by assault the strongly fortified Austrian positions on the Poloniny range (4,000 feet high). In certain places troops got stuck in such deep snow that they could neither advance any farther nor retire; in other places, the charges coming down over the slopes caused avalanches which buried friend and foe under one single great cover of snow. Notwithstanding "the great natural difficulties to be overcome," the Russians had by April 1 passed Ustrzyki and were approaching Volosate, and only one single ridge separated them now from the Uzsok line, in the rear of the pass. Farther to the west they were in full possession of the mountain range of the Poloniny, which dominates the entire road leading from Dvernik by Berechy Gorne to Vetlina; from there they threatened the eastern flank of the Austrian positions round Kalnica. Meantime other Russian columns were pressing from the north on to the Smolnik-Kalnica line. On April 1 they captured the important position of Vola Michova on the Smolnik-Cisna railway. To the west of Vola Michova they had crossed into the Virava valley, reaching the village of Virava. Thus by now the whole big loop of the Sanok-Homona railway round Lupkow and Mezo-Laborcz was in their hands, and the Austrian positions in the mountains between Lupkow and the Vetlina-Zboj road were threatened also from the western flank. Each day was bringing in new and considerable captures of Austrian prisoners; especially the Slavs, unwilling fighters for an alien and even hostile cause, were surrendering in big numbers.

On April 2 and 3, very heavy snowfalls were reported from most sectors on the Carpathian front. Fighting subsided for a while. We can measure that to some extent by the number of prisoners taken by the Russians. Whilst on April 1 it had exceeded 7,000, during the next two days it amounted to an average of only about 2,000. The capture of Vola Michova by the Russians rendered untenable the Austrian positions along the entire line from Smolnik to Kalnica. The Austrians withdrew from them in the course of the following two days, whilst the snowstorm was impeding a vigorous pursuit on the part of our Allies. On reaching the railway station of Cisna, on April 4, the Russians captured a considerable amount of rolling-stock and big stores of ammunition, which the Austrians had been unable to remove. A Russian official *communiqué* published on

AUSTRIANS IN THE TRENCHES.

On the left are wounded soldiers, who have been lifted out of the trenches, receiving the attention of a member of the Red Cross.

THE KAISER IN GALICIA.

April 6 names the sum total of the captures that had been made by our Allies in the region between the Lupkow and the Uzsok during the fortnight of severe fighting, which preceded the lull of April 3. "During the period from March 20 to April 3," it says, "we took prisoners in the Carpathians, on the front from Baligrod to Uzsok, 378 officers, 11 doctors and 33,155 men. We captured 17 guns and 101 machine-guns. Of these captures 117 officers, 16,928 men, 8 guns, and 59 machine-guns were taken on a front of 15 versts (10 miles)."

On April 4 the Russian advance recommenced along the entire line. From Cisna our Allies forced their way up the road leading along the stream called Rozstok, took by assault the village of Rozstoki Gorne and advanced in the deep snow across the pass bearing the same name as the village. Their vanguard even reached the Hungarian village of Orosz-Ruszka, in the valley of the Siroka, at the foot of the Rozstoki Pass. A violent counter-attack by which the Austrians tried on the following night to dislodge this advanced detachment of Russian troops failed completely.

Meantime the Germanic armies had concentrated formidable reinforcements, especially between Homona and the valley of the Laborcza. The entire strength of the German reinforcements in the Carpathians was estimated at between four and nine army corps. Some of these troops had been withdrawn from East Prussia and Poland, some few from the Western Front; most of them consisted, however, of new formations. A whole German corps appeared in the Laborcza valley, under the command of the well-known General von der Marwitz, who had commanded in the summer of 1914 the German cavalry during their advance against Paris; he had subsequently been transferred to East Prussia. On April 6 the Germanic armies opened their counter-offensive in the district south of Lupkow. Their *communiqués* speak of great successes and also claim the capture of six thousand Russian prisoners between April 5-7 in the region east of the Laborcza valley. The Petrograd dispatches admit a slight advance of the Germanic forces, but state that the Russian troops, after having occupied the front Czabalovce-Szuko, were able to repulse all further attacks of the enemy.

The holding of the line Czabalovce-Szuko implies a withdrawal of the Russian troops from the positions which they had previously occupied in the valley and village of Virava; the desperate Germanic counter-offensive evidently aimed at saving the Austrian troops, which held at that time the frontier-range south of Lupkow and Vola Michova, from being enveloped and cut off from the south. On April 9 the Russian advance is resumed. From the direction of Czabalovce our Allies dislodged on that day the enemy forces which had forced their way up the Virava valley. From Vola Michova "we seized Height 909," says the Russian official *communiqué*, "with the result that the enemy was repulsed along the entire length of the principal chain of the Carpathians in the region of our offensive." Thus on a front of more than seventy miles, from the Dukla to the Uzsok, our Allies had conquered by April 9 the mountain crest which separates Galicia from Hungary. The Germanic counter-attacks undertaken on the same day (April 9) in the neighbourhood of the Rozstoki Pass failed completely; their net result was the capture of an entire battalion of Austrian infantry by the Russians.

Also nearest to the Uzsok the Russian offensive was developing in favour of our Allies. "Our offensive along the line Uszyca-Volosate-Bukowiec, in a southerly direction," says the Petrograd official *communiqué* of April 10, "continues despite excessively difficult local conditions. Cutting their way through snow,

sometimes more than six feet deep, our troops have approached at several points within a distance of three miles from the Uzsok valley." The battle for the Uzsok continues on the next day (April 10). The Austrians still hold the mountain-group of the Opolonek, to the west of the pass and their positions in that region are of such strength that the Russians can hardly hope to take them by assault But the Russian ring round the Uzsok is tightening. On April 11 severe fighting is proceeding north-west of the Uzsok, along the road and on the slopes between Bukowiec and Beniowa, whilst north-east of the pass our Allies capture Wysocko Nizne, a village situated at the point at which meet the only roads that connect the Munkacz-Stryj with the Uzsok-Turka line and cross the river Stryj. Only the high mountain Magora (3,323 feet) lies between Wysocko and the Uzsok. The fighting increases in violence during the next two days, and both sides claim victory. We may perhaps most safely assume that the battle in the direct neighbourhood of the Uzsok has by April 14 reached a deadlock; we hear after that date very little of further fighting in this region, and the main efforts of our Allies seem to be concentrated henceforth in the sector between Virava and the Cisna-Rozstoki-Sztakesin road. An advance along that road from Sztakesin towards Berezna, by threatening the lines of communication between the Uzsok and Ungvar, would have compelled the Germanic forces to evacuate their mountain fortress in the Uzsok Pass. It was from that direction, as well as from Volosate, that our Allies press on hardest about the middle of April.

Continuous fighting had been proceeding in the region of Volosate ever since the Russians had reached that village in the first days of April. The battle had been raging over the road leading from Volosate across a height of 2,600 feet, through the valley of Lubnia towards Sztarina; this latter place, as will be remembered, lies on the Uzsok-Ungvar railway line, in the rear of the main Austrian positions round the Uzsok Pass. A mountain 3,331 feet high, described by its measure in metres as Height 1,002, dominates the road through the Lubnia valley. The loss of this mountain would have meant disaster to the Austrian troops which were fighting to the east of it, in the Uzsok Pass. The battle for these positions assumed an especially desperate character on April 21. According to the Austrian version, the Russian attacks were repelled and 1,200 prisoners were taken. The Petrograd reports state that on April 21 our Allies captured a position of the Austrian trenches on Height 1,002, and that during the following night the Austrians attacked along the entire front from Lubnia beyond Bukowiec, but failed, suffering considerable losses. That is the last detailed information which we get of fighting in that region before the Germanic advance from the west compelled our Allies to relinquish their positions in the Carpathian Mountains.

On April 9 the Russians had captured, south of Vola Michova, Height 909, called the Wysoki Gron (High Mountain).* On April 11 and 12 further progress was made in the mountains north-east of the village of Telepovce. The advance was carried out in the entire sector, proceeding from north-west to south-east. "In the Carpathians," says the Russian official *communiqué* of April 16, "our troops noiselessly approached the enemy's barbed-wire entanglements between the villages of Telepovce and Zuella, broke through, and after a brief bayonet encounter, gained possession of two heights, taking numerous prisoners." On the same day our Allies captured the village of Nagy Polena † east of Zuella. The Austrians delivered counter-attacks, and the fighting in that region continued almost without interruption during the next few days. A later dispatch from Petrograd states that the captures made during the night operations described above included 24 officers, 1,116 men and three machine-guns. Especially vigorous attacks were delivered by the Austrians against the heights south of Telepovce on April 18, but by a counter-attack the Russians compelled them "to evacuate the approaches to their positions and captured an Austrian battalion, which surrendered *en bloc*." During the next few days our Allies continue their advance to the south-east of Polena, in the direction of the Uzsok line, but the fighting loses generally in intensity. The Russian official *communiqués* for April 20–21 report no fighting in the Carpathians, except Austrian attacks north-west of Runyina. The

* "Gron" for mountain, is neither Polish nor Ruthenian; it is derived from the Czech word "hron," which the Galician mountaineers have taken from the Slovaks. There is a considerable number of heights in the Carpathians called *gron*.

† "Nagy Polena" is another example of a mistaken assimilation of misunderstood words. "Naga Polena" means in Slav languages a "bare clearance"; "nagy" in Magyar means great or big.

THE GERMANS IN GALICIA.

Officers surveying the results of a bombardment after the German troops had passed through a village in Galicia.

dispatch of April 23 states that "nothing of great consequence happened during the day, and the position remains unchanged." The *communiqué* of April 25 reports that "artillery and rifle fire of varying intensity alternates at some points with minor outpost engagements." In fact, the great Carpathian battle had come to an end about April 16. "From April 5—that is 18 days after the beginning of our offensive—" says the dispatch from the Russian Headquarters, published on April 18, which gives a *résumé* of the entire battle, "the valour of our troops enabled us to accomplish the task that had been set, and we captured the principal chain of the Carpathians on the front Regetow-Volosate, 110 versts (about 70 miles) long. The fighting latterly was in the nature of actions in detail with the object of consolidating the successes we had won.

"To sum up, on the whole Carpathian front between March 19 and April 12 the enemy, having suffered enormous losses, left in our hands in prisoners only at least 70,000 men, including about 900 officers. Further, we captured more than 30 guns and 200 machine-guns."

As we have stated above, comparatively little fighting took place during the early spring to the east of the Uzsok. During the week between March 20-27, the customary German attacks were continued round Koziowa and Rozanka. They ceased on March 27, for the first time since they had begun early in February. "The abandonment of the German attacks," says the Russian official *communiqué* of April 7, "is a recognition on their part of the uselessness of the enormous sacrifices which they have made." Their previous sacrifices had certainly been useless, but the attempt at forcing their way to the north through the Orawa valley, was by no means abandoned; on April 8 a new German attack was delivered against the Zwinin heights. This time the attack seems to have been directed from the flank, from Rosochacz, about seven miles north-west of Koziowa; simultaneously another advance was opened from Rozanka, about 14 miles south-east of Koziowa. On April 9 the centre itself was attacked and Hill 992 was taken. For months it had been the goal of all German endeavours; their joy knew no bounds. Every soldier who took part in this final attack against Hill 992 got the Iron Cross.

But the possession of this height did not benefit them to any marked extent. "Koziowa and the adjoining positions," says the Petrograd *communiqué* of April 9, "remain in our hands." Holding the precious Hill 992, the Germans felt bound in honour to enlarge their conquests; this led merely to further sacrifices. On April 18 they attempted an attack against the village of Goloveczko, but were repulsed. On April 19 they attempted from the direction of Hill 992 an attack against the adjoining heights which dominate the village of Orawczyk. At first

successful, they were dislodged on the same night by a Russian counter-attack. The fighting in this district, on a narrow front, over ground which had been held and organized for many months past, where, in addition, no strategic turning movements were possible, assumed more and more the character of a siege. To take but one example: one Petrograd *communiqué* of that period contains the following description: "On the East Rozanka range we exploded on Sunday (April 18) a mine under a German trench. This was immediately followed by a bayonet attack by our infantry, who carried the position. We captured about a hundred Germans, four machine-guns, and one trench-mortar."

The ultimate end of all that fighting was in reality to be determined far away, in the west, in the region between Tuchow and Gorlice. By April 20 the battle has subsided along the entire Carpathian range. The warm weather has reached the mountains, the snow is melting, the streams are swelling, the roads become impassable. Meantime the signs of an approaching storm multiply in the west. Spring has advanced in the plains and foot-hills, and

WATCHING A BATTLE.

A Russian Commander watches a battle from outside his subterranean quarters. The Cossack (on left) is waiting for the officer's instructions.

RUSSIAN PRISONERS OF WAR (IN BACKGROUND) AND CIVILIANS UNDER AUSTRIAN GUARD.

operations can be resumed in Western Galicia. On April 20 the first German attack undertaken by more considerable forces is delivered in the direction of Gorlice. The concentration of the Germanic forces in the Cracow region becomes public knowledge. The military critic of the *Novoie Vremia* discusses, under date of April 23, the appearance of new German armies round Cracow. Certain movements in the Dunajec region lend credence to the rumours of the transfer of several corps from Poland and a large body of Hungarian cavalry, in addition to reinforcements from the West. "Evidently," says he, "the Germans . . . are beginning seriously to assemble in the region of Cracow."

As has been previously pointed out, the extreme south-eastern corner of Galicia—*i.e.*, the district round Kolomea, and the Bukovina constituted during the early spring a separate theatre of war. Within that theatre we can distinguish three distinct sectors. The line from Nadvorna to Niezwiska (on the Dniester), running from south-west to north-east, formed the western front of the Pruth district. Heavy floods were rendering impossible any operations in the numerous shallow river valleys which traverse that region. We hear only now and then of some desultory fighting along the higher ground between Tlumacz and Ottynia.

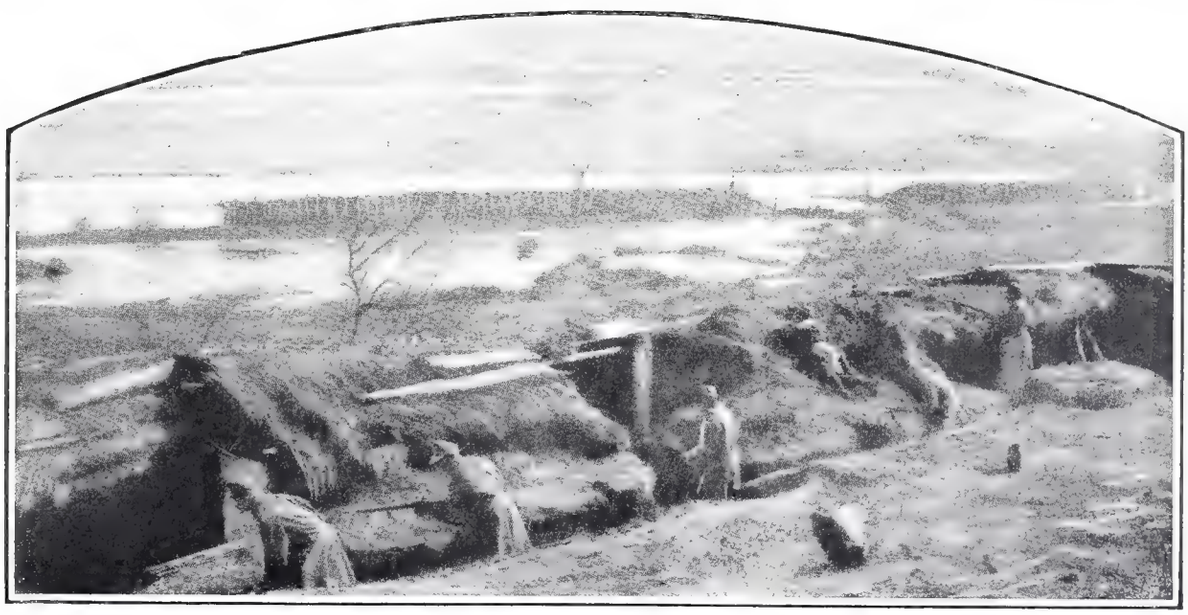
The central sector of the Pruth district extended along the Dniester from Niezwiska to the big loop of the river round Uscie Biskupie.* The belt of the Dniester formed, on the whole, an effective barrier between the opposing armies. Between Niezwiska and the Russian frontier the river attains a breadth varying from 240 to 300 yards, and an average depth, mid-stream, of about 6 to 8 ft. It cuts its winding path through a narrow cañon, with banks from 150 to 300 ft. high; the farther we go to the east, the deeper becomes the cañon. The course of the river is exceedingly complicated. Niezwiska itself lies at the head of one of its huge loops; taken all round, the loop is no less than 20 miles long, although its neck is not more than one mile wide.† The numerous tributaries which the Dniester receives from the north flow within a belt of about 15 to 20 miles from their junctions with the Dniester, through similar cañons. Outside the cañons the country is a complete plain; these are the steppes of ancient Tauris, the region of the famous "black soil," one of the most fertile soils in the world. The land out on the plain is too valuable to be given up to forest; the sides of the cañons, even where

* "Uscie" is a very frequent place-name in Poland and the Ukraina. It is a corruption of the word "Ujscie," which means "the mouth of the river, the estuary." The second word means "of the bishop"; thus the whole name is "the Bishop's Estuary." The village belonged down to the end of the eighteenth century to the Bishops of Kamieniec Podolski in Russian Podolia.

† All that is said here about the cañon of the Dniester applies only to its course *below Nizniow*; west of Nizniow there are no cañons.

they are not very steep, are not fit for cultivation; no fertile soil covers them, heavy rains and the waters from the melting snows in spring cut deep furrows into their surface sharp edges protrude from the different geological layers of stone and rock. This is the proper area for forests; the forest, in turn, to some extent, secures the slopes from erosion. Anyone acquainted with forestry knows the advantages derived from having forest in a compact mass; anyone acquainted with the people inhabiting the land on the Dniester knows the special disadvantages of scattered forests, situated perhaps in the proximity of villages.* Anyhow, by a natural process of development most of the forests of the Dniester region are grouped together round the cañons of the river and of its tributaries. The river, the cañon and the forests form together what we have previously called the strategical "dead belt of the Dniester." But then we must warn the reader jumping at hasty conclusions. The belt of the Dniester forms an obstacle to operations on a big scale, not to the crossing by small bodies. Such crossings can be easily undertaken in boats where the heads of the river, the high banks of the cañon, and the surrounding forests hide the detachment from the sight of the enemy; there is hardly a river in Europe more difficult to guard than the Dniester. Nor are there many rivers over which bridges can be built with greater ease, in spite and in face of the enemy. Take the following example, which illustrates a case that actually happened in March. We are standing in front of a loop of the shape of the Greek letter Ω. We are holding the outer side and wish to cross the river into the inside of the loop. The inside is usually lower ground than the outside, for it is naturally softer soil, on which rains and streams have, therefore, left deeper marks than on the harder strata; the ground of the opposite bank is evidently harder and stronger, as it has offered effective resistance to the river and forced it inwards, towards the softer strata. If we wish to build a bridge at the head of the bend we have merely to post artillery in a position from which it can sweep the narrow neck of the loop, and then our engineers can carry on their work at the other end under cover of the high banks, undisturbed by the enemy. It is hard to imagine more interesting ground for the tactician than that which he finds in the valley of the Dniester. It is ground over which the heart of a Red Indian warrior or of a Pathfinder might rejoice. But a big army could not accept battle with such ground in its rear. A reverse might too easily change into disaster. Small engagements were incessantly fought in this region ever since it became, towards the end of February,

* If the peasant of the Dniester region steals other things occasionally, he steals wood on principle. This is not meant to be a joke; it is a fact. It is based on the primitive philosophy of "the right to the product of labour." The sheaves of corn stand in summer unguarded in the wide, open fields, and yet theft from the fields hardly ever occurs; the corn is the product of another man's labour. "But air, water, and wood, God has made for all men alike," says the peasant. The demand for communal "forests and meadows" (*lisy i pasovyska*) is the heart-felt cry of all agrarian movements in those districts; when serfdom was abolished in 1848 hardly any provision for the peasants was made in that direction.



AUSTRIAN TRENCHES NORTH OF THE KOLOMEA DISTRICT.

THE RUSSIANS IN THE CARPATHIANS.
An advance party.

the border-land between the Austrian and the Russian forces; both the Cossacks, who are accustomed to similar ground from their homes in the steppes of Southern Russia (the Dniester region is, in fact, only the farthest western end of the Ukrainian country), and the Austrian "flying column," under Colonel Count von Bissingen, achieved first-rate tactical feats in that region. But no big armies crossed the Dniester east of Niezwiska, in either direction.

We pass to the third—the eastern—sector of the Pruth region. It stretched along a line between the Dniester and the Pruth, at right-angles to both these rivers. Its position varied at different periods, it moved to and fro. Most frequently it stood along the Austro-Russian frontier; but sometimes it advanced further to the west, and ran from a point close to Czernowitz across the heights of the Berdo Horodyszcze to the forests round the Dniester; at other times it was pressed back by the Austrians on to Russian ground. This varied according as either General Kitchenko, the Russian commander, or Colonel Papp, his Austrian opponent, tried some new and successful strategic experiment. It would, however, be a mistake to attach any considerable importance to the fighting which took place in this sector in the course of March and April.

During the night of February 19–20, the Austrian troops entered the town of Czernowitz, the Russians having previously withdrawn to the northern bank of the river Pruth, on to the heights above Old Zuczka. South-east of Czernowitz, on the southern bank of the Pruth, lies, on a height of about 600 ft., the suburb of Ludihorecza. It is there that are situated the waterworks of Czernowitz. On March 15 our Allies assumed the offensive; containing the main forces of the enemy in front of Czernowitz, they crossed the river opposite Ludihorecza and occupied the heights with the waterworks, thus gaining an important *point d'appui* to the south of the river. Their main line ran at that time along the northern bank of the Pruth from Novosielica on the Russian side of the frontier, by Bojan and Mahala to Old Zuczka. From there it turned to the north-east, to Sadagora, the seat of a famous dynasty of miracle-working rabbis, the Mecca of thousands of pious Chassidim.* Sadagora lies at the foot of the range of Berdo Horodyszcze (about 1,700 ft. high); near its ridge extended the western front of the Russian position. In the north, on the Dniester line, the Russians were holding about this time also the southern bridge-head of the bridge at Zaleszczyki, the only one spanning the Dniester between Nizniow and the Russian frontier.

* The Chassidim are a fanatic Jewish sect, especially strong in southern Russia. The novel "The Master of the Name," in Zangwill's "Dreamers of the Ghetto," deals with the life of its founder.

The Russian hold on the immediate surroundings of Czernowitz was rendering the position of the Austrians in the town extremely precarious. By day and by night pressed labourers were compelled to dig trenches round the town, under Russian fire, for the defence of their Austrian defenders. On March 21, having received reinforcements, the Austrians proceeded to attack the Russian positions between Old Zuczka and Sadagora, and on the following day our Allies evacuated the latter town, after having held it for about seven months. The Russians were giving ground in the south, but were at the same time trying to advance in the north, from the direction of Czerniawka, in an attempt at outflanking the Austrian troops. The battle lasted several days, the severest fighting raging between Czernowitz and the slopes north of Rarancze. Outnumbered by the enemy, the Russians withdrew on March 27–28 towards Bojan, and on April 10 evacuated also that town, to return to it only four days later.

Whilst our Allies were retreating on Bojan, on March 2 two divisions of Austrian cavalry, supported by a considerable force of infantry, attempted a raid into Russian Podolia, in the direction of Chocim, near the Bessarabian frontier. This raid was widely heralded by the Germans with a view to impressing and cowing Rumanian public opinion, but two days later the Austrian forces were in full retreat towards the frontier. On March 30 several battalions belonging to the 42 Hungarian Honvéd Division were surrounded by the Russians near Szylowce (on Russian territory, about a mile east of the frontier), losing many dead and wounded and about 1,500 in prisoners. By April 2 no Austro-Hungarian troops were left on Russian soil.

Some interesting fighting was proceeding about the same time in the cañon of the Dniester, round Zaleszczyki. Zaleszczyki, the chief town of a Galician rural district, with a population of more than 76,000, lies in a loop of the Dniester, on a gentle slope descending from the high plateau toward the river; the depth of the cañon approaches at that point 300 ft. It is a station on the branch railway connecting the important railway junction of Czortkow with Luzany on the Kolomea-Czernowitz line. It is one of the most picturesque towns in Galicia. Built on terraces of red sand-stone, which form the left bank of the cañon, it enjoys an almost southern climate. The whole slope, looking towards the south, is exposed to the sun, and the sandstone acts as a reservoir of heat. Spring starts here earlier than out on the plateau; the summer nights are intolerably hot and close. Grapes and apricots ripen on the terraces; the cold north winds, which blow across the open fields of the plateau, never touch

AUSTRIAN TRENCHES ON THE BANKS OF THE DNIESTER.

ON A TOUR OF INSPECTION.

The Archduke Frederic, Commander-in-Chief of the Austrian Army, with the Archduke Joseph in Galicia.

them. The plateau north of Zaleszczyki is so flat that the high road to Czortkow follows for about eight miles an ideal straight line, which is not cut even by a single depression or valley. Only at one point to the east of the road arises a small hill, the highest point (about 1,000 ft.) on that high plateau. The strategic importance of Zaleszczyki lies in that it is an important centre of roads, a railway station, in that it possesses permanent bridges across the Dniester and is in every way one of the safest and most convenient points for crossing the river. In 1854, during the Crimean War, when hostilities between Russia and Austria were apprehended, fortifications were constructed both north and south of Zaleszczyki; some new trenches were built north-east of Zaleszczyki, near Torskie, during the Balkan crisis, in the winter of 1912–13.

In the cañon, and on the plateau east of Zaleszczyki, beyond the village of Zezava, extend dense forests. It was from that direction that an Austrian force tried on the night of March 22–23 to turn the Russian positions near Zaleszczyki. The attacking detachment consisted of the "flying column" of Count von Bissingen, which had distinguished itself in February during the fighting round Stanislawow, and of a company belonging to the 29th Hungarian Landsturm Regiment under Zoltan Desy, a distinguished member of the Kossuth Party in the Hungarian House of Deputies.*

The Austrians crossed the Dniester in boats, and made their way through the forest near Zezava, but on emerging from it they struck against Siberian Fusiliers and Cossacks holding a strongly fortified position. A fierce battle ensued, in which Zoltan Desy was killed and the Austro-Hungarian troops were badly beaten. The attempt against Zaleszczyki, undertaken by the best troops of General von Pflanzer's army, failed completely.

Some more fighting is reported near Zaleszczyki on April 10. On April 17 a body of Tyrolese Fusiliers made another attempt to break through the Russian line near Zezava. They delivered a furious attack, but, caught in the Russian wire entanglements, were simply annihilated by the fire of the Russian artillery.

On April 4 our Allies undertook a counter-offensive from Uscie Biskupie. Having constructed a bridge across the Dniester, at the head of a river-loop east of the village of Filipkowce, they reached the road leading from Uscie Biskupie by Okna and Kuczurmik to Czernowitz. Okna is the terminus of a railway line which branches off at Werenczanka from the Czernowitz-Zaleszczyki line. At Kuczurmik meet the roads leading from Zaleszczyki and Uscie Biskupie to Czernowitz. Hence a successful advance along the road beyond Okna would have turned from the rear the Austrian positions south of Zaleszczyki, and put an end to all further Austrian attacks against its bridge-head. Of what followed we have two contradictory versions.

We are told from Russian sources that on April 4 a Russian cavalry brigade, supported by small detachments of infantry, crossed the river and advanced by Zamuszyn to Okna. In front of the village of Okna it came up against strongly organized positions, which were held by the 25th Hungarian Honvéd Regiment and some Austrian infantry. Our Allies delivered a bayonet attack, annihilating two battalions of the Honvéds and capturing 21 officers, more than a thousand of the rank and file, and 8 machine-guns. On the contrary, the Austrians claim to have destroyed two battalions of Russian infantry belonging to the Alexander Regiment, to have taken 1,400 prisoners, and to have driven back the Russians beyond the Dniester; they say that on their retreat the Russians destroyed the bridge which they had constructed across the river.

Towards the end of April the Russians concentrated again more considerable forces in the district of Bojan and regained most of the ground which they had held in the Bukovina about the middle of March.

Thus the war was raging in the secluded valley of the Dniester, where a long-drawn echo from the rocky walls of the cañon repeats many a time every shot fired in its dense forests. It is strange for anyone who knows that beautiful, strange country, to think of all these troops marching and remarching through the quiet, clustered villages, which previously hardly knew a foreigner; where a man from a village some 10 miles off arouses curiosity by his strange dress. For almost every village in that region has its own dress by which

* As a patriotic Magyar he volunteered for service though an old man. He had been Parliamentary Under-Secretary of State in the Hungarian Coalition Cabinet, which went out of power in December, 1909. It was he who, some two years before the war, compelled the Premier, Lukacs, to retire from public life by exposing very grave scandals in which the latter was implicated.

one can recognize its inhabitants; they seldom migrate to other villages and hardly ever intermarry. There is only one distant land of their dreams, and that is Canada. One may hear small children in villages on the Dniester babbling about it, how they will go, when they will be grown up, beyond that distant town of their modern legends Vinipeg (Winnipeg). The movement of transoceanic emigration has got hold of the entire country of Galicia, and the returning emigrants are already leaving their mark on the country. Equally strong is the emigration to America from the Carpathian districts about which we have spoken above.

Dr. L. Blasel, a lieutenant in the Austrian Army, gives in a letter written from the valley of the Virava in the first days of April, an interesting description of the primitive inside of the hut of a mountaineer. Everything seemed to lead him back into the Middle Ages; the old fireplace, the hand loom, the spinning wheel. But when he tried to speak to the Slav peasant, who was, of course, a Hungarian subject, he found that the latter did not understand any of the Austro-Hungarian languages which he knew. Then at last he discovered that the one language in which they could converse with one another was English. The old peasant had been to America. "It is queer," remarks the Viennese officer, "that one has to make just a small detour round by way of America when one wants to talk to one of one's own countrymen."

Little was happening in the early spring along the line of the rivers which stretched within the big curve of the Vistula, along the Bzura, Rawka, Pilica, and Nida, and farther south along the Dunajec.* The season of "the Polish mud," of the unfordable roads had set in. The two armies were facing one another in trenches which were being developed into model fortifications. Especially in the hills and pine-forests on the Pilica and its tributaries, the Pissa and Czarna, where wood is plentiful and near at hand, and where the ground favours the development of the new art of entrenching, formidable defences were constructed by both armies. Here they had stood on the same ground ever since the end of December. During the long and uneventful

* For a detailed description of that line, cf. Chapter LXIX.

AUSTRIAN RED CROSS IN THE CARPATHIANS.
Nurses working among the dead and wounded on a battlefield.

"got from a Russian officer some nuts and sweets. To-day the Russians are singing, playing mouth-organs, and dancing."

Another Polish-German soldier from another part of the line writes that every Russian soldier got for Easter ten eggs and eight buns, and that they were sharing those with their German opponents. "For three days lasted perfect peace, not interrupted by a single shot."

Just as in Poland, fighting died down towards the end of March on the Niemen and the Narev front. According to one estimate three German army corps were at that time holding the line in front of the Niemen, four are said to have stood between Osowiec and the Orzec (the river east of Prasnysz), and another four between the Orzec and the Vistula. Even if this estimate is correct for March 20, it is almost certainly too high for April; about that time whole army corps were transferred from this front to the Carpathians. We hear about the middle of March that the 40th German Reserve Corps is holding the line between Suvalki and Kalvaria, the 39th, under General von Lauenstein, the district south of Suvalki, and the 38th, under General von der Marwitz, the country round the Orzec. But we know that General von der Marwitz commanded in the beginning of April the German reinforcements in the Lupkow region.

A month's bombardment by the heaviest German howitzers had made no impression on the forts of Osowiec. The period during which the marshes of the Bobr are frozen was passing, and the Germans had to think of extricating their artillery before the ground became impassable. "Since Sunday (March 21)," says a Russian official *communiqué*, "the Germans have been removing from before Osowiec their heavy batteries, leaving only four." No shot from the heavy howitzers had struck the concrete of the fortress. "The enemy did not even succeed in dislodging our infantry from their field-works." Only a feeble cannonade continued on March 27; during the following days it ceased altogether. It was resumed on April 11 with 8 in. howitzers, and on April 14 the Germans attempted an advance against Osowiec. It was easily repelled. The so-called siege of Osowiec (it never was a real siege, it was merely bombarded from the north) had come to an end.

Here and there, on the Orzec, the Omulew and the Szkwa, some occasional fighting occurred, some prisoners were taken, some trenches captured. On the whole this line does not deserve much attention. With the exception of some more lively encounters in the region between the Omulew and the Szkwa, round the villages of Tartak, Wach, and Zawady, it was merely part of the usual routine of the trench warfare, as it is carried on in a flooded country. The famous battlefields between Myszyniec and Kolno were all under water. If we add that Zeppelins visited Lomza and Bialystok, killing a few civilians, and that a Russian airship bombarded on April 20 the railway station of Soldau, we have practically completed the story of the war as it developed during the early spring on the Narev and Bobr front.

Fighting on the Niemen front, during early spring, was similarly of merely secondary importance. The Germans had withdrawn towards the end of March their main forces closer to the East Prussian frontier and only smaller bodies were left in advanced positions round Kalvaria, Suvalki, and Augustovo. Similarly the main Russian forces were concentrated on their main line of defence between Kovno and Grodno.

One rather interesting action, fought by more considerable forces, is reported from the district of lakes and forests east of Sejny and Suvalki. On March 27 the German 31st Division supported by three Reserve Regiments and a large body of cavalry advanced from Kalvaria to Krasno. They had been ordered to attack from the flank and the rear the Russian forces which were operating in the district round Lodzie. The Russians were holding the passage between the lake Dusia and Simno. The ice-crust which grows in the course of the winter on the Lithuanian lakes is so thick that it takes a good long time before the thaw renders dangerous the passage across it. The surface may be even covered by water, but firm ice still remains beneath. The Germans decided to cross the lake and in that way to turn the positions of our Allies. They, however, learned of the movement in good time and delivered counter-attacks at Zebrzyski and Metelica. The German troops which had crossed the lake suffered a fearful defeat. One battalion of the famous 21st Army Corps, which had been operating in that region since the middle of February, was practically annihilated. Its last remnants surrendered to the Russians on the next day near Strumbaglow. The entire German force retired from Krasno on March 31.

Throughout April trench warfare of secondary importance proceeded with varying success on the more open ground between Mariampol, Ludvinovo and Kalvaria. This is, *e.g.*, a Russian report dealing with the fighting of April 9: At day-break the Russians attacked the German positions between Kalvaria and Ludvinovo "and captured, following upon an obstinate bayonet fight, two lines of trenches. We took prisoners 600 of the rank and file and several officers, and also captured eight machine-guns." Similar reports describing German successes appear on other days in German *communiqués*; on some days both sides have to report gains from different parts of the front.

Did not every battle, even the smallest, entail so much of human tragedy, we might say that, during the early spring, outside the Carpathians, most of the fighting was carried on, at least from the point of view of strategy, *pour passer le temps*.

AUSTRIANS IN A TRENCH FIRING A MACHINE GUN.

AUSTRIAN OFFICERS REFRESH THEMSELVES.

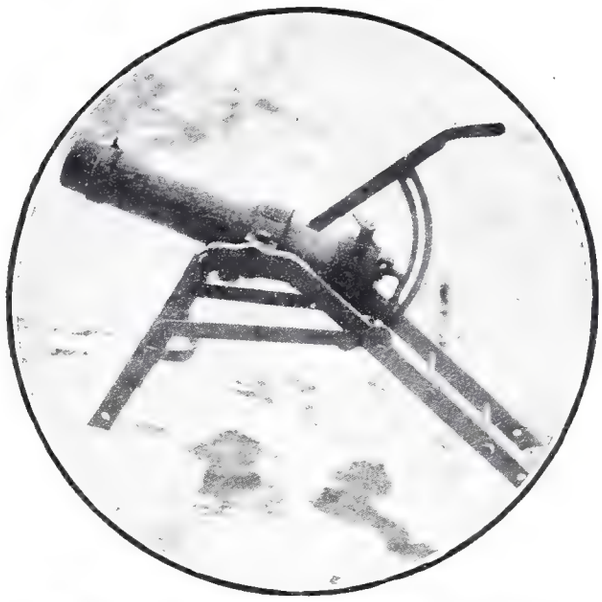
In the extreme north, beyond the river Niemen, stretches along the sea a narrow strip of land, still forming part of East Prussia; it includes the districts of Heidekrug and Memel, and Memel is its chief town (the true Lithuanian and Slav name of Memel is Klajpeda). The population of this district is mainly Lithuanian, the towns are German.* Separated from the rest of East Prussia by the broad barrier of the lower Niemen, it is of practically no strategic importance.

On March 17 a detachment of Russian troops advanced from Taurogi towards Memel. Near the frontier they fought an encounter with Prussian troops, capturing two guns, four machine-guns, two motor-lorries full of ammunition, and a number of prisoners. On the same day they entered the town of Memel. No importance was attached to this raid in Petrograd, but in Berlin it excited the most intense irritation, even rage. "A cheap success was gained by Russian troops who invaded North Prussia in the direction of Memel, plundering and burning villages and farms. Russian towns occupied by us have therefore been ordered to pay a heavy penalty as damages. For each German village or farm burnt by these hordes three Russian villages or farms will be destroyed. Each act of damage by burning in Memel will be answered by the burning of Russian Government buildings at Suvalki and other capitals of governments occupied by us."

When the Russians approached Memel, the two regiments of Prussian Landsturm which defended it disbanded and mingled with the population. "When our troops entered the town at 8 p.m.," says the Russian official *communiqué* of March 21, "they were received with fire from the houses and from behind barricades. The civilian population, as well as the troops, took part in the fighting. Our troops were then withdrawn from Memel, which was subjected to a short bombardment.

* In the district of Heidekrug 61·9 per cent. of the population are Lithuanians, in the district of Memel, 47·1 per cent.; if we take the rural districts of Memel, apart from the town, the proportion of the Lithuanian-speaking population rises to 70 per cent.

Our shells put an end to the resistance of the enemy, and the town was evacuated, the inhabitants fleeing towards Königsberg along the narrow neck of land which separates the Kurische Haff* from the Baltic Sea." Big bodies of German troops were thereupon moved against Memel, which the Russians evacuated on March 22. Prince Joachim, the youngest son of the German Emperor, was with the troops which "liberated" Memel, and as a good Hohenzollern, did not fail to deliver a speech. He promised the burghers of Memel to report all the woe which they had suffered to the Kaiser and to Hindenburg, and added: "But be sure we will not retreat before the enemy has got his just deserts and is severely punished."



GERMAN BOMB THROWER CAPTURED BY THE RUSSIANS.

AUSTRIAN OFFICERS TAKING OBSERVATIONS.

And now came the German revenge. As "punishment for Memel" a levy of £5,000 was imposed on "the wealthy town of Suvalki" (in reality it is a miserable little place, inhabited mainly by small Jewish traders and artizans; it had already previously suffered very severely from the continuous fighting which had been proceeding in that district since the middle of February). "A few hours after the issue of the order," says the semi-official *Norddeutsche Allgemeine Zeitung*, "it was possible to observe the impression which it made on the population. At its own request it was allowed to pay part of the sum in corn and flour instead of cash."

Further, orders were given to bombard "the fortresses" of Kovno and Grodno. Were their forts hit? No; "the market square of Grodno was hit by six bombs and their powerful effect was ascertained."

Finally a penal expedition was undertaken by German warships against the small seaside resort of Polangen. Polangen (in Lithuanian, Pallanga), a small town close to the Prussian frontier, had for centuries been Lithuania's "window" on to the sea.* North of it stretched Courland, south-east of it Prussia, the lands held by Lithuania's mortal enemies, the Teutonic Knights. Polangen was an important harbour in the fifteenth, sixteenth and seventeenth centuries; in 1685, by permission of the Polish King, Jan III. Sobieski, English merchants founded a Chartered Company for trading with Polangen. In 1701 the harbour was ruined by the Swedish King Charles XII., at the request of the German merchants from Riga, and the English Trading Company migrated to Libau. All that is left of the past glories of Polangen are some old walls, the fine castle which now belongs to the family of the Counts Tyszkiewicz, and a small wooden church dedicated by the people to the memory of the last Lithuanian heathen priestess Biruta; she died in the beginning of the fifteenth century and is now known in popular legends by the paradoxical description of St. Biruta. We must add, in justice to the German warships which bombarded Polangen on

* The Kurische Haff is a big, shallow bay, almost an inland sea; Memel lies at its northern end.

* "Langas" means in Lithuanian, window; this access to the sea was secured by the Lithuanians after long and hard fighting, in 1422. In 1819 the district of Polangen was included by the Russian Government in the pro ince of Courland.

March 23, that two old, cracked guns, dating back to the seventeenth century, are posted on the shore, near the old harbour.

On March 28 German warships fired some 200 shells on Libau, killing a few civilians and damaging some merchant vessels in the harbour. The bombardment was continued a few days later by a seaplane, which was sunk on April 6. "The airmen who had devoted their energies to the dropping of bombs on the peaceful town of Libau," says a Russian official *communiqué*, "were rescued by us and made prisoners."

In the latter part of April some petty fighting took place between Memel, Tilsit and Taurogi, but it was not until the last days of the month that a more serious German attack opened against the Russian Baltic Provinces, the forerunner of the great Germanic offensive in Western Galicia.

CHEERS FOR THEIR BRITISH ALLIES.

The famous Russian Fongorijski Regiment give "Three cheers for King George!"

CHAPTER LXXVII.

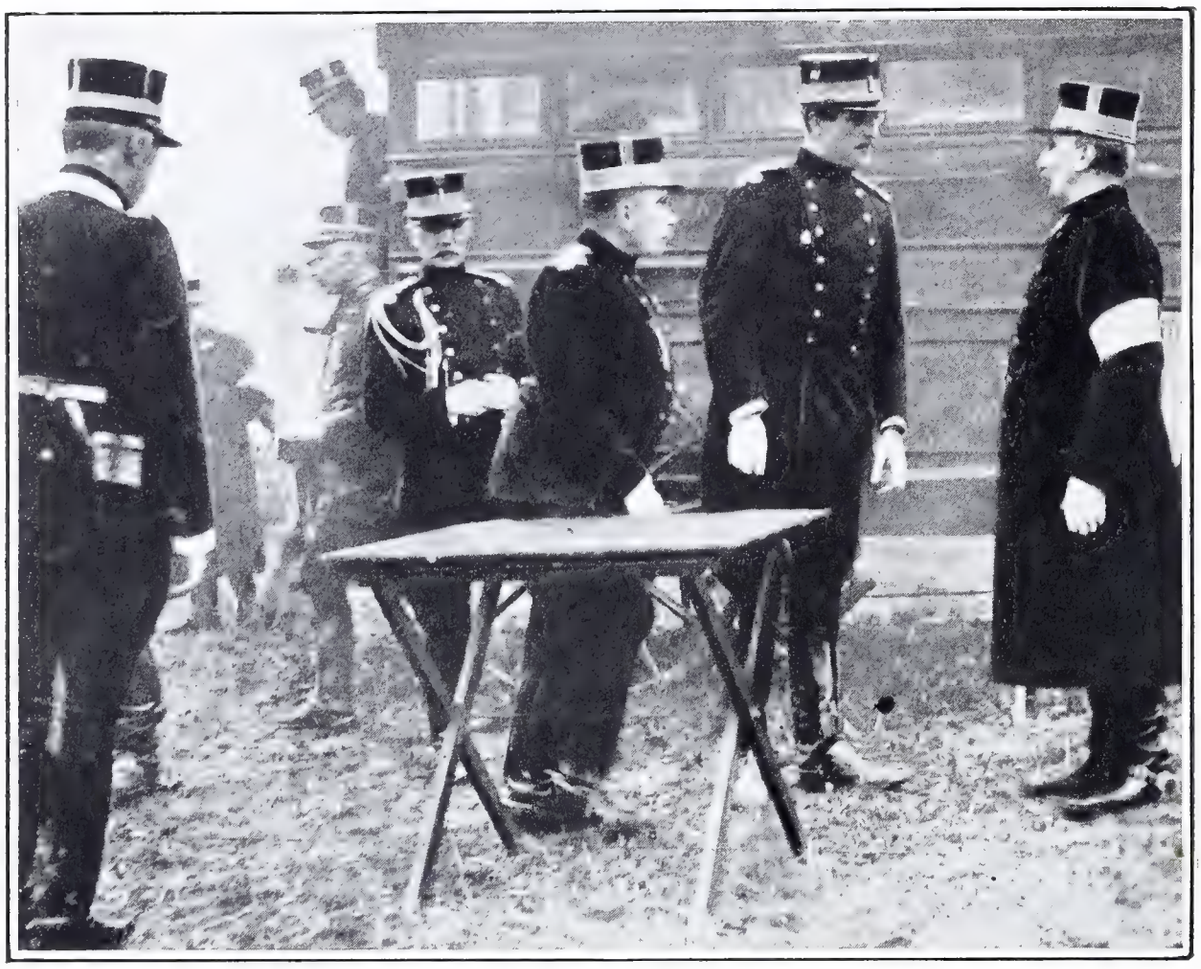
BELGIUM UNDER THE GERMAN YOKE: THE FOOD PROBLEM.

DISTRESS IN BELGIUM—WANT OF FOOD—COMMISSION FOR RELIEF IN BELGIUM ORGANIZED—THE COMITÉ NATIONAL DE SECOURS ET D'ALIMENTATION—WORK OF MR. HERBERT C. HOOVER—PURCHASE OF FOOD—TRANSPORT—DISTRIBUTION—FINANCIAL ARRANGEMENTS—THE "MOBILIZATION OF BENEVOLENCE."

THE work of the relief and feeding of Belgium must take its place among the highest achievements compassed by the heart and mind of man in the exaltation of a great struggle. The account of how this work was accomplished is not only a story of generosity and self-sacrifice on the part of those who successfully performed the task, but an example of forethought, organization, effort and resolution rarely met with except in the great issue of life and death. The task presented was a gigantic one—the feeding of seven million destitute persons in a country where the ordinary means of transport were monopolized by a hostile army of occupation. A population, perhaps more highly organized industrially than that of any other European country, found its manufacturing centres laid waste, its factories destroyed or closed, and the harbour of Antwerp, grown during years of peace and prosperity into one of the chief ports of Europe, occupied by the enemy. Belgium supported an immense population in her manufacturing and mining towns, but she depended largely upon the outside world for her food supplies.

The Belgian was not open to the reproach that he had neglected the domestic source of food supply. Every inch of soil in that country was laboriously cultivated, but so dense was the population that the land furnished less than a quarter of the wheat which its people consumed, and it is wheat which was the staple food. Belgium may be compared with a vast manufacturing district which sells its products in foreign countries, and buys its food with the proceeds of the sale. When there are no sales there is no food. Between these peoples, then, and starvation there was nothing but the food produced in the country, and this, which under normal circumstances would have sufficed but for a short period, had been greatly reduced in amount owing to German requisitions and devastations.

It has been necessary to state these facts briefly, for one must grasp them all to realize how overwhelming was the disaster which befell Belgium, and how progressive, industrious, and guiltless was the community which suffered under it. The people could no longer gain their living, and as time went on the country became less and less able to feed itself unaided. Menaced by dangers of all kinds, many Belgians fled abroad, especially to Great Britain and Holland. The story of these migrations is told in the next chapter; the present deals with the condition of the vast majority who stayed in Belgium. Under normal circumstances it would be the business of a Government to alleviate distress among the people. But the Belgian



THE KING OF THE BELGIANS IN FLANDERS.
At an inspection of a Red Cross equipment.

Government, taken by surprise and driven from its official seat, was not in a position to discharge its normal functions. It could neither send emissaries through the country to enquire into local conditions nor enforce measures that it deemed salutary. The Germans, for their part, were not seriously disposed to mitigate, at any cost to themselves, the lot of their Belgian victims. Even when they had partially restored the machinery of civil government, the German military authorities were not actively concerned to alleviate distress, while, as shown above, in the autumn of 1914 the Belgian channels through which alone relief could flow were stopped up. In short, a few weeks of war had brought a civil population of seven millions within sight of starvation. Yet another few weeks and the situation would be this: no food in the country, no means of transporting it from without, no money to buy it. Something had to be done.

To avert the impending catastrophe Mr. Brand Whitlock, the American Minister in Brussels, and the Marquis de Villalobar, the Spanish Minister, entered into consultation with leading Belgians. It was decided to seek an understanding with the belligerent Governments which would facilitate the importation of food; and this understanding was brought about. With the German military authorities it was negotiated by the two Ministers already mentioned; with the Allied Governments it was the work of Mr. Page, the American Ambassador, and Señor Merry del Val, the Spanish Ambassador in London. This was the first step; the belligerent Governments accepted the principle that, subject to certain guarantees, the importation of food for the civil population of Belgium should be encouraged. The practical work was next undertaken.

As a result of conferences which took place in London late in October, the Commission for Relief in Belgium was organized; and at the same time the Relief Committee which already existed in Brussels was expanded into the Comité National de Secours et d'Alimentation by the addition of delegates from similar associations which had been constituted in the different provinces of Belgium. In a sense the Commission and the Comité were two aspects of the same organization, for they

occupied the same set of offices and cooperated towards the same ends without any overlapping of functions; but theoretically they remained distinct bodies in compliance with the international agreements to which they owed their formation, and, therefore, they must be considered separately.

The Commission for Relief in Belgium was under the patronage of the American Ambassadors and Ministers in Brussels, London, Paris, The Hague, and Berlin, the Spanish Ambassador in London, and the Spanish Minister in Brussels; it consisted of seventy-five members—seventy-one Americans and four Spaniards—and its proceedings were controlled by a Board of Directors composed of the following:

Chairman.—Herbert C. Hoover.

Directors.—Lindon Wallace Bates, America; John Beaver White, Shipping and Purchase; C. A. Young, Holland; Captain J. F. Lucey, Holland (Nov.–Dec.), Belgium (Jan.); Col. Millard Hunsiker, Great Britain (Oct.–April); Oscar T. Crosby, Belgium; Daniel Heineman, Belgium (Nov.–Dec.); Albert N. Connett, Belgium (Feb.–April).

Honorary Treasurer (New York).—A. J. Hemphill.

Honorary Secretaries.—Millard K. Shaler, London; Edgar Rickard, London; William Hulse, Brussels (Nov.–Jan.); Robert McCarter, New York; Perrin C. Galpin, Brussels (Feb.–May); E. D. Curtis, Brussels.

Executive Committee.—Herbert C. Hoover, Colonel Millard Hunsiker, Lindon W. Bates, John Beaver White, Daniel Heineman, Señor Don José Congosto, Millard K. Shaler, Robert McCarter, Edgar Rickard, William Hulse, Captain J. F. Lucey, Albert N. Connett, C. A Young, A. J. Hemphill, Robert P. Skinner, Edgar Sengier, Hugh S. Gibson, L. W. Bates, jun., Marshall Langhorne, Herbert R. Eldridge, Perrin C. Galpin, J. A. Nash, G. Nauta, and J. Van den Branden.

All members of the Commission rendered their services free of charge, and the American members who filled the more important offices gave up their entire time to the work. Some idea of the extent of the organization the Commission was called upon to improvise may be gathered from the fact that it had offices in London, New York, Rotterdam, Brussels, Antwerp, Hasselt, Liége, Namur, Libremont, Mons, Ghent, Bruges, Charleroi, and Maastricht.

The Comité National de Secours et d'Alimentation was under the patronage of the American and Spanish Ministers in Brussels, and was thus constituted:

President.—M. Ernest Solvay.

Vice-Presidents.—M. Jean Jadot and L. Van Der Rest.

Executive Committee.—M. Emile Francqui (Chairman); MM. Oscar T. Crosby, Hugh Gibson, Daniel Heineman, and Wm. Hulse (the Commission for Relief in Belgium); Manuel Alonso De Avila y Barnabeau; Josse Allard;

RELIEF SHIP FOR SUFFERING BELGIANS.
Wheat and rice on board a ship which left the Thames in October, 1914. The sacks were addressed to the American Minister, Brussels.

le Comte Cicogna ; Louis Cousin ; E. Van Elewyck ; Em. Janssen ; Michael Levie ; Ch. De Wouters D'Oplinter ; F. Van Bree (Secretary).

The Comité comprised delegates from various provincial sub-committees, these in their turn being composed of the representatives of *communes* and *arrondissements*. The head office was in Brussels ; and, in addition, there were branch offices at Antwerp, Hasselt, Liége, Namur, Libremont, Mons, Bruges, Ghent, and Charleroi. The administrative work was undertaken by an executive committee. As has been said, the two cooperating

MR. HERBERT C. HOOVER,
Chairman of the Commission for the Relief of the civil population of Belgium.

bodies remained nominally distinct. The essential difference lay in this, that the Commission for Relief in Belgium was composed of neutrals, and the Comité National de Secours et d'Alimentation of Belgians. The former was responsible to the various Governments for the observance of the conditions they had imposed, made purchases over seas, organized the vast work of transportation and importation, and maintained its control of supplies until they had reached what may be called the retail distributors—in this case the Belgian communal authorities. The Commission was composed almost entirely of American business men of the type that has made American organization famous the world over—men with a profound knowledge of commercial principles and of their practical application on a large scale. As a body they were without experience of relief work, nor were they chosen for their familiarity with Belgian conditions ; what they were asked to do was to mobilize the provision industry of two hemispheres, and to concentrate foodstuffs upon the districts threatened by famine ; and this they did with a forethought, a thoroughness, and an elaboration of detail which none of the belligerent strategists could have surpassed in the deploying of armies. And between the problem they were required to solve and that of the strategist there was this difference : his, in its general aspect, had been familiar for years ; theirs arose out of a sudden emergency ; and whereas his organization had been perfected in every detail against the time of trial, theirs had to be improvised in a period which might be measured in hours. The Commission first met on October 22, 1914, and the first cargo of foodstuffs passed over the Belgian frontier on November 2.

The work of the Comité National de Secours et d'Alimentation supplemented that of the Commission. As we have regarded the task of the latter as strategical, theirs might be called tactical. Food was placed at their disposition in the form in which it could be most advantageously employed ; and with it they fought the famine. Being composed of Belgians the Comité was in touch with local needs and customs ; they acted in an advisory capacity to the Commission and were responsible for the administration of funds contributed for the relief of the absolutely destitute.

Before describing in detail the functions of the Relieving Body we must refer to its status. What the American and Spanish Ambassadors had called into being was almost a new Power. It was accorded a flag of its own, and it entered into diplomatic relations with the warring and neutral Governments. That these relations remained cordial even when—as often happened—the privileges asked for could not be accorded is a standing tribute to the respect inspired by Mr. Herbert C. Hoover and his fellow workers. The Commission—henceforward it will be convenient to refer to the whole Relieving Body by that title—succeeded in effecting an understanding with the Powers on a variety of subjects. As a result of these

THE QUEEN OF THE BELGIANS.

THE CENTRAL CLOTHING SUPPLY STATION.

agreements the flag of the Commission obtained immunity from attack at sea, its emissaries were permitted to trade through the enemy lines, and to transfer money from one belligerent country to another, and sundry valuable privileges were granted in connexion with railway transport, customs duties, canal dues, etc. As an instance of the diplomatic activities of the Commission, it may be mentioned that at the end of December, 1914, representations as to the condition of the civil population in Belgium were made through Mr. James Gerard, the American Ambassador in Berlin, and his Dutch and Spanish colleagues. Through their good offices an undertaking was obtained from the German Government to abstain in the "occupation zone" from making requisitions of food which the Commission would have to replace.

To achieve results of this kind it was necessary that the Commission should convince all the Powers of its absolute neutrality, and the importance of an impartial attitude in spirit as well as in deed was most strenuously impressed on the whole body of helpers. These latter were given to understand that, as their task was to feed starving Belgians, any conduct or expression of opinion which would make that task harder was an act of treachery to their colleagues. That these instructions were loyally obeyed is proved by the confidence reposed in the Commission by all parties. Its ships passed unmolested across the seas, members of the Commission were welcomed by the Ministers of all the European Governments, and the German military authorities allowed the accredited representatives of the Commission to travel freely in Belgium, and went so far as to issue to them special passes. To sum up, the crisis produced the men to deal with it, and with the menace of starvation there sprang into being an organization with the will and the power to bring a sufficiency of food into Belgium.

The relief organization which had thus been called into being had to discharge various functions, which were defined as follows:

(*a*) The creation of the detailed organization necessary for the systematic and discriminating provisioning and clothing of the destitute, not only with imports, but also by purchase and distribution of native meat, potatoes, etc.

(*b*) The co-ordination, central control and stimulation of charitable effort throughout the world in the support of the destitute.

(*c*) The elaboration of the necessary organization for equitable distribution of the imported provisions to those who could pay for their own food.

(*d*) The establishment of the financial machinery, by agreement among the various Powers and with banking institutions, providing for working capital and the translation into gold of local currency and obligations collected in Belgium.

(*e*) The purchase overseas, and shipment and inland transport throughout Belgium, of the essential foodstuffs.

(*f*) The execution of the undertakings with the various belligerent Governments assuring protection on the high seas and non-interference inland, and the distribution of the foodstuffs exclusively to the civil population.

(*g*) The maintenance of accurate accounting, auditing, and other checks upon all branches of the work, not only to provide evidence as to the execution of guarantees, but also to ensure integrity of administration.

The work of the executive departments may best be considered in the following order: (1) The acquisition of foodstuffs (N.B.—The

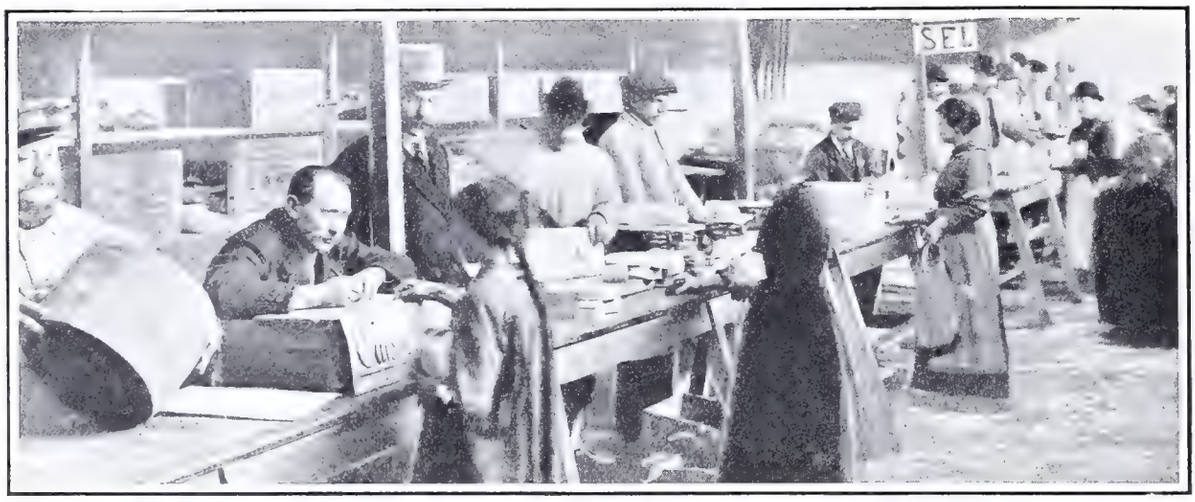
Commission did not confine its operations to foodstuffs, but these were its prime concern); (2) Transportation; (3) Distribution; (4) Finance; and (5) The "Mobilization of Benevolence."

Where was food to be found? In accordance with the law that highly-developed countries tend to become manufacturing centres it may be laid down as a general proposition that Western Europe—in which Belgium is situated—does not produce foodstuffs in excess of its requirements. Even under normal conditions it imports wheat, and once war had broken out it would have been in no condition to supply deficiencies in Belgium had that country remained neutral. Thus the Commission found itself obliged to look beyond the seas for assistance.

Of the wheat-producing countries Russia was cut off by the closing of the Dardanelles. Help, if it came at all, had to come from distant lands, such as America, India, and Australia. That is to say, the Commission which had been called into being in Europe was compelled at the very outset to conduct operations in all parts of the globe. Since, however, the Commission had been expressly made up of men who were accustomed to do a world-wide business, no transaction was likely to confound them merely by its magnitude. They were in touch with firms to whom large foreign purchases were matters of daily routine, and to these firms they applied for assistance which was most generously granted. The word "purchase" prompts a query about payment which will be answered later. All that need be said about finance here is that the Commission proved its competence by utilising the willingly-offered services of the most experienced buyers, and by making its acquisitions in the most suitable markets. This demanded not only experience but the imagination to grasp a situation to which there was no parallel in history—a situation moreover which was liable to sudden and violent alteration. Given money or credit, the commodities could be acquired in the markets which produced them, but what was needed was not so many tons of wheat in Adelaide or in Winnipeg but that amount delivered in Belgium at an early date. The problem was indefinitely complicated by the question of freightage. It was not enough to have secured immunity for the flag of the Commission. It was necessary to charter ships to fly it, and with the demand for tonnage at the height at which it stood, the cost of transportation and the time it would require had to be specially calculated in connexion with every transaction. For this purpose ordinary reference tables were useless. Among other points which required careful consideration were the relative nutritive values of different foodstuffs, and their relative suitability to the conditions under which alone transportation was possible. The decision at which the Commission arrived will be gathered from the following table, which represents the minimum monthly demand for foodstuffs as it was estimated in April 1915. It does not include potatoes, which were acquired for the most part locally:

	Tons.
Wheat (or equivalent in flour) ...	60,000
Rice	10,000
Peas and beans	5,000
Bacon and lard	1,200
Preserved meat...	1,200
Preserved fish	1,200
Condensed milk	300

A CARGO OF FOOD FROM NOVA SCOTIA.



A PUBLIC SALE OF FOOD.

It will at once be noticed that none of the commodities are subject to rapid deterioration. The Commission did not make a practice of buying up the food which was stored or was grown in Belgium; but as a consequence of their importations the price which local produce commanded was largely reduced. The Commission, then, bought the kind of food it required in all the markets of the world. It also accepted gifts of food in any "transportation centre" in any country, and undertook to deliver it free of all charge to the donors. Included in such gifts were the complete cargoes of twelve large steamers. Some idea of the extent of the work done by the acquisition department may be gathered from its expenditure; it amounted to £1,500,000 per month.

We can now conceive the Commission as holding large quantities of foodstuffs in places out of Europe. To hold food at a time when the population of a rich and easily accessible country needs it, is not a conjuncture which under normal conditions would put a strain on the heads of big commercial houses. Some wrangling there might be over selling prices and freights, but the bulk of the work would be discharged almost mechanically by a staff of experienced clerks. The capacity of railroads, the relative merits of routes, the facilities at ports of discharge, the state of the foreign exchanges—these and similar factors, which suggest insoluble mysteries to the layman, are expressible in simple figures by those who have to deal with them in their daily life. The knowledge that underlies those figures, though not easily acquired, is to be found, so to say, on tap in the offices of such firms as worked for the Commission, and the consideration of it need not detain us further. What, however, may be pointed out is that these big firms contributed their experience without charge to the business of relief, and that the men they employed gave their services with the same generosity. Indeed, it would probably have been impossible to carry out the work of transportation but for the assistance freely tendered by public and private officials throughout the world. The Commission, then, had the experience of the mercantile community at call, but in the circumstances that existed the accumulated knowledge and experience to which we have been referring no longer sufficed; new methods had to be improvised to meet new conditions. It will help us to understand these conditions if we regard the transportation of foodstuffs as a matter of three processes—transportation from the centre of collection to the port of departure; transportation from the port of departure to the port of discharge; and transportation from the port of discharge to the local distributing warehouse in Belgium.

The first process—the transportation to the port of departure—presented comparatively little that was abnormal. It took place far from the battlefields, and if there can have been few railway systems in the world which remained unaffected by the demands of the contending forces, still the exporter worked under the protection of the ordinary law; his men were engaged in their customary vocations; and they were not exposed to violence or to hostile action of any kind. But the policy that prevailed in the "catchment" area was modified. What was sought now was not profit but food. As we learn from the complaints made from time to time by

English agriculturists, what railway companies find expensive is the collection of small consignments. It is owing to the "long haul" that produce can be moved cheaply in new countries where the quantities handled in each operation are large.

But the Commission did not confine its dealings to foodstuffs in bulk; in order to encourage the charitable it undertook to convey free of charge all gift food within its own radius of collection.

As for the transportation from the port of departure to the port of discharge, the disturbance created by the war in the shipping trade expressed itself in the scarcity of ships, in their liability to capture and in the difficulty of obtaining crews.

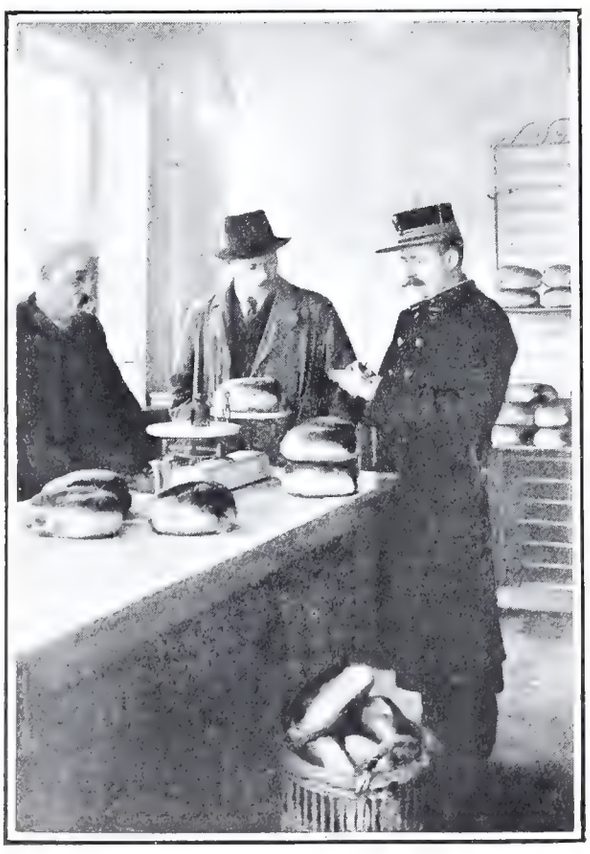
As has been already stated the Commission was early successful in obtaining recognition from all the belligerents, its flag carried with it immunity from attack on the high seas, and for that reason a Commission ship was as safe to sail in as anything afloat. But there remained the scarcity of ships. Such of the cargo vessels of the Central Powers as were still trading confined their operations to closed seas—the Baltic and the Black Sea. Of the rest some had been taken over for military purposes by their respective Governments, some had been captured, some had been interned by neutral Powers. none were at the disposal of the Commission. The ships of the other belligerents had been withdrawn also in large quantities from their trading functions. Large numbers were conveying troops and stores to the various spheres of operations. Others had been sunk or detained in the hostile ports which they had entered before the outbreak of the war. There remained the depleted mercantile marine of Great Britain and her Allies, and the merchant ships of neutrals. But these, taken together, formed but a small proportion of the normal supply of ships, tonnage was in great demand, and freights rose to an unprecedented height. Obliged as the Commission was to secure cargo space for months in advance, its outlay on this single item was enormous. Indeed, it was calculated that shipping costs would be reduced by £160,000 a month if an arrangement could be arrived at for the utilization of the German ships laid up in American ports. Negotiations with this object in view might have been pursued more actively had not the initial cost of refitting those ships for the sea been estimated at £200,000. However, ships had to be chartered and they were chartered. By April, 1915, a weekly service of steamers was maintained between the ports of North America and the River Plate, on the one hand, and Rotterdam on the other.

After the goods had been discharged at Rotterdam a new set of difficulties had to be met. The Belgian railways were monopolized by the army of occupation for military purposes and the use of them was practically denied to the Commission. How then was the food to be placed within reach of a population strictly confined to its own villages? Once again we hear of the canals that have played so

SERVING OUT SOUP TO CHILDREN IN BELGIUM.

large a part in the military history of the Low Countries. The men who made them had found them potent allies against Louis XIV. and Philip of Spain, but never did they render such momentous service as in this time of destitution. They were the channel through which the food ultimately reached the starving. Not that the problem was the simple one of utilizing existing waterways. Locks and banks had vanished in many places in the common destruction, and the Commission had to establish an engineering department before the water communications were restored. In a short time the engineers reopened the channels and so made possible the final process of transportation. This done, the food discharged at Rotterdam was transferred into barges bearing the flag and marks of the Commission—to be towed along the canals to the warehouses which had been established at suitable points throughout Belgium. With its storage in these, the transportation officials had fulfilled the task set them; they had brought a sufficiency of food into a country where 7,000,000 people were starving.

As far as we have followed the work of the Commission what it had accomplished was this: it had made it physically possible to feed the population. Whereas when it began



WEIGHING THE LOAVES.

WORK FOR THE UNEMPLOYED.
Making-up bundles of wood.

operations there seemed no prospect but starvation before the people—rich or poor—for the simple reason that the supply of food was rapidly giving out, after a few weeks of creative effort enough food for urgent needs was once again in Belgium. But neither in food nor in cash were the resources of the Commission inexhaustible. The demands upon both continued to increase, and the privileges which alone had made feasible the work of relief were liable to be withdrawn by the belligerents at any time. In fact, the utmost economy in the distribution of the food was indispensable. Moreover, since general social laws are not suspended in war time, a system of indiscriminate doles was to be regarded as an evil only less fatal to the ultimate welfare of the Belgian people than starvation itself. Food, then, was to be distributed, but subject to the condition that those who could pay for it, either in whole or in part, should do so to the extent of their means. With the adoption of this principle it became necessary to create a new system of finance, for coin had disappeared and credit could only be galvanized into life by stimulation exerted by public bodies. For our present purpose it will suffice to state that the vanished currency was replaced by notes issued by the local authorities, to be redeemed later. By an ingenious system of checks and balances, the business of provisioning Belgium was made to return what was technically a profit.

Belgium is a highly-organized country with democratic institutions. Large centres, such as Brussels, possess each their own municipal government with specially defined rights in

their own sphere; but the whole country, including these large centres is divided into communes, which manage local affairs. The communes, for instance, relieve their own poor, and for this purpose they appoint the necessary officials. That is to say, in every district there existed the machinery for relief, and this was made the basis of the organization which the Commission proceeded to establish. Aided by local volunteers, the experienced relieving and medical officers became responsible for the detailed work of distribution in the region with which they were familiar. They acted upon the instructions of their communal council, and that in turn conformed to the principles which the Commission laid down from time to time in the interests of the whole country. To sum up, the food which the Commission imported was *sold* to public bodies and was distributed by them.

The principles upon which the communal officers were required to act embodied the Socialist maxim: "From each according to his means; to each according to his need." The Commission imported foodstuffs to the value of about £1,500,000 a month. These imports were entered in its books at cost price or in the case of gifts at a valuation. As we have seen, the imported provisions were deposited in various warehouses in Belgium, all of which were under the control and ownership of the neutral Commission. From these they were delivered to the communal officers who supervised the final distribution. Each Commune was debited for what was supplied to it at rates calculated to return a small but definite profit on the sum at which they stood in the books of the Commission. The object of this system was to compel the well-to-do to help in providing for the destitute; and in accordance with it the profit was allocated to the Benevolent Department, the functions of which will be referred to later. The Communes had thus acquired the foodstuffs by purchase; in their turn they sold part of them at nearly cost price to accredited tradesmen in furtherance of a settled policy. For the Commission was not content to keep so many Belgians alive. It stood also to maintain the national machine in running order, so that when the time came to apply the former power it might be in a condition to respond to it. For this reason the tradesmen were required to furnish the communal officials with a list of their customers. After their lists had been scrutinized and approved, they were supplied with food in proportion to the number of individuals they

FOOD STACKED INSIDE A CHURCH IN BRUSSELS.

TWO OF THE AMERICAN COMMISSIONERS.

catered for, the price of resale being fixed by the Commune. In the case of flour, for instance, at one time, bakers received 250 grammes per adult customer, the amount representing about 325 grammes of bread. The baker was authorized to sell the bread at about the same price for a given weight as he had been charged for the flour; and with the margin he was enabled to meet his establishment charges. In some provinces, however, the baker, who was simply an agent, received eight francs for every 100 kilos of flour he baked. It is a startling testimony to the Commission that between November, 1914, and March, 1915, the Belgian was paying less for bread than was the Londoner.

It has been stated that of the provisions purchased by the Communes part was sold to local tradesmen. The remainder was made over to communal canteens which had been established for the feeding of the poorer residents, that is, for those who were not in a position to pay for what they needed. All Belgians were equally in want of food, but they were not equally in want of money; and with this distinction in view the authorities divided them into three classes: those who could meet their own expenses—the middle and upper classes; those who could meet them in part only—the poorer working class; and those who could not meet them at all—the absolutely destitute. The first class dealt with the tradesmen. The second and third classes were fed at the communal canteens upon the presentation of tickets, which were issued only after each case had been investigated. The second class paid for their tickets; the third class received them without payment. Where possible, the Communes gave employment to members of the second and third classes, paying for it by orders upon the canteens. As a further instance of the completeness of the organization mention may be made of the institution of special baby-canteens, where were provided five different types of ration, each one appropriate to a different stage in a baby's progress. It rested with the communal doctor to decide which ration a destitute baby should receive, and to issue on its behalf the necessary ticket. He was furnished with tickets of five kinds, one for each type of ration. Furthermore, children between the ages of three and twelve were fed at the schools.

So far we have referred only to the foodstuffs imported by the Commission. In addition there was a certain amount of Belgian produce which had been kept back by the Belgians for their own use; there was also the sugar crop of the year stored and awaiting export; and in Antwerp there were large stocks of coffee imported from Brazil for distribution in Europe. Of coffee and sugar, then, there was an ample supply, while the residue of Belgian produce was brought into the market as soon as the risk of famine had been averted by the action of the Commission. This residue was not taken over by the public authorities, but the price at which it could be sold was kept down by the fact that the Commission was selling food at the cheapest remunerative rate. Incidentally it may be mentioned that

BREAD AND SOUP
At a distribution centre.

the Commission imported potatoes, of which there was a sufficiency in the country, to force the holders of local stocks to sell at a reasonable price.

The measures taken had resulted in the distribution through the ordinary channels of such food as there was in the country, and of the distribution through the Communes of as much more imported food as was needed. As regards payment, stringent precautions were taken to compel every person who was capable of so doing to pay, either in money or in labour, for what he received. But with or without payment a ration was provided for everyone.

The next point to consider is the financial system, which made it possible to import foodstuffs to the value of £1,500,000 a month for seven millions of people, who were reduced to a paper currency of little or no purchasing value abroad. The working capital was raised partly in charitable gifts, partly by what in the extraordinary circumstances may be called commercial methods. The former will be considered in the next section from the standpoint of charity ; here they represent so much money and so much in commodities for which money would otherwise have been paid. As has been stated elsewhere, foodstuffs which were presented in kind were entered in the books at a valuation. Charitable contributions are estimated to have amounted to $2\frac{1}{4}$ millions sterling by the end of April, 1915.

The first action of the Commission was to obtain a loan from Belgian financiers—the money itself being advanced in London and Paris upon securities previously held in Belgium. The official report of the Commission gives the following account of its proceedings in this connexion:

PREPARING SOUP.

GIVING OUT A DAY'S RATIONS.

The Provision Department has been advanced a working capital of £2,000,000, this money having been provided by Belgian Banks and Institutions, and is in the nature of a loan against purchased food in transit. This working capital is wholly inadequate in view of the fact that food supplies to the amount of £3,000,000 must be in transit at any given moment in order to maintain the constant flow that is necessary. The moneys collected in Belgium are Belgian bank-notes and, as stated above, if these could be exported by the Commission they would not be realizable abroad in gold. Furthermore, the limited circulating medium now available in Belgium would gradually disappear. The Commission is practically limited, therefore, to the amount of its revolving capital which it can recover, to such occasional instances of foreign exchange on Brussels as can be purchased, and such arrangements as it can perfect with Belgian Banks and Institutions outside of Belgium. The Commission has secured permission from the various governments to receive money in London and New York against which payments are to be made to Belgians in Belgium from the notes collected from food sales, thus effecting a form of exchange. Further than this the joint organizations have effected an arrangement with Belgian Banks and Institutions by which, for the moment, the residue of notes received in Belgium are converted into gold. So long as these arrangements can be maintained the Provisioning Department can revolve itself and out of the margin of profits contribute something to the Benevolent Department.

This process calls for further examination. At first we tend to conceive the Commission as buying foodstuffs with the original advance of gold and as selling them to the Communes. For what ? Belgian paper. But any such system would have broken down at once, Belgian paper not being acceptable in the markets where the foodstuffs were purchased. We now see that the problem of provisioning Belgium was a problem of exchange in the financial sense. The Commission had to find gold to pay for its purchases abroad.

To effect this result many complicated agree-

ments were entered into. In the first place the Commission obtained complete control of Belgian finance. It was constituted the sole agent of exchange, that is to say, it received in the first instance all remittances to Belgium, and was thus enabled to maintain the exchange value of Belgian paper within the country. These remittances amounted to a much larger aggregate than one would have supposed. On the outbreak of war the Belgian Government and financial institutions had sent abroad large sums in gold and securities. With these they resumed payment of pensions, salaries, separation allowances, the interest on Belgian Rentes, and so forth, as soon as they were satisfied that the money would reach its lawful owners. A large proportion of the economies of the Belgian people had been invested in the Rentes through

CUTTING OUT GARMENTS.

the agency of the savings banks, and drafts on these deposits were constantly reaching Belgium. These public payments—if they may be so styled —represented about £800,000 a month in gold due to Belgium from foreign countries. Moreover, the Belgian refugees who had left the country were remitting some £150,000 a month to their dependents at home. Again, the Commission—which had undertaken relief work in France also—contrived to sell there part of the Belgian sugar crop of 1914, and a large amount of Brazilian coffee which, as in other years, was awaiting distribution in Antwerp.

Belgium thus became a creditor nation each month for a considerable amount of gold, which was remitted in the first instance to the Commission. The Commission passed on the remittances to the persons entitled to them, but in the paper money which it had received for the imported foodstuffs. With the gold, supplemented by a loan of £600,000 from the Belgian National Bank and by charitable contributions, it was enabled to purchase more foodstuffs abroad. But as time wore on, what with the exhaustion of local resources and the rise in the price of foodstuffs, the financing of the Relief Fund became more and more difficult. To recapitulate the financial process, the Commission bought what it needed in the best markets of the world, paid for its purchases, and recovered the money from the communal authorities ; the Communes made over much of the foodstuffs to tradesmen at a small profit ; the rest went to the communal canteens which supplied food to the destitute and to those who were able to pay but small sums. The provisioning department of the Commission was, then, working on something approaching commercial lines ; indeed it was returning what was nominally a profit. But its activities did not end here ; it organized a " Benevolent Department " to help the Communes deal with destitution.

As we have stated, the communal canteens were feeding 1,500,000 people who were unable to pay the tradesmen's prices ; and it was the cost of conducting them which imposed upon the Commission its heaviest burden. The canteens dispensed foodstuffs supplied through the Commission, and also meat, potatoes, etc., purchased locally. The expense was estimated at from 12 to 15 francs per month for each person fed, or about £700,000 a month in all.

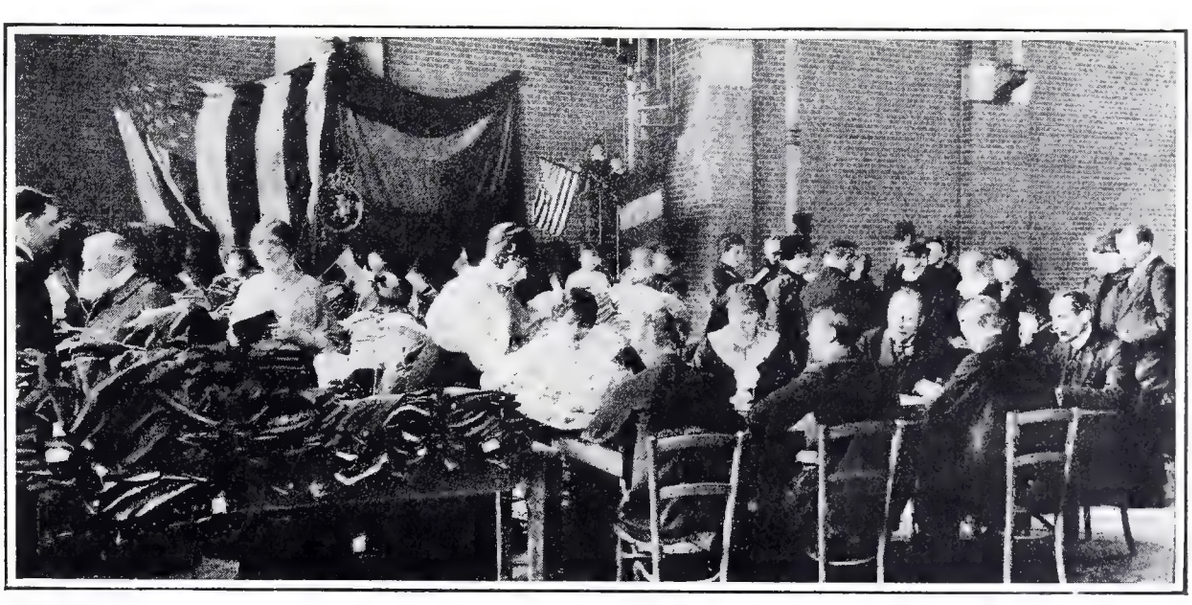
This sum was made by (*a*) the money received for the sale of food tickets as described on page 452 ; (*b*) local charitable contributions ; (*c*) charitable contributions from the world at large ; and (*d*) profits from the Provisioning Department.

Under headings (*c*) and (*d*) come the contributions of the Commission. These were allocated in proportion to the needs of each Commune. Some Communes—those, for instance, in which destruction had been greatest—were practically dependent on outside help ; others bore a large part of their own expenditure. Brussels, indeed, for a long time shouldered an immense burden without assistance. In every case, in order to ensure economy in working the canteens, the subvention from the Commission was kept within the sum which the Commune would have to find to feed its destitute. Economy —a far-sighted economy which did not preclude the expenditure of large sums—was the policy of

the Commission. Especially did it exert itself to keep the Belgians "above the bread-line"—that is, in a position to pay for what they consumed. A few of its expedients may be enumerated. It set large numbers to make slates and bricks against the time when such would be needed to rebuild ruined houses. It even devised means to help a trade for which no early revival could be predicted, by advancing to the lace-workers 20 per cent. of the value of the lace they were thus encouraged to make. It imported coffee and potatoes, although large quantities of these commodities existed in Belgium, in order to "break down the rings" of sellers. Again, to save the cost of a double organization, the Provisioning Department sold imported gift food in the same way as other imported foodstuffs—the money in this case being credited free of all deductions to the Benevolent Department. And, lastly, it may be mentioned that there was a delegate of the Commission on every provincial committee. His control was complete, for he represented the neutral body who were technically owners of the warehouses and what they contained. He could thus enforce economy in the matter of rations, and check any unwarranted expenditure which the local authorities might have been induced to connive at.

"The Mobilization of Benevolence" was the phrase used by the Commission to describe both the appeal which it made to the charity of the world, and the measures it took to turn the response to account; it is apt, for the word "benevolence" suggests the vague and universal feelings of sympathy which are aroused by great misfortunes, and the technical term "mobilization" the scientific, practical methods by which these feelings were intensified and utilized. What the world was asked to provide was not only money and such material commodities as Belgium needed, but also personal service, and the scale on which it did provide personal service will be realized from the bare statement that the Commission was assisted by more than a thousand committees. One of the first steps taken by the Commission was to make known through the Press and other agencies the true story of Belgian needs. This entailed the erection of advertising machinery on a large scale.

At the same time, in cooperation with the Governors and Premiers of various States, and with the Government officials generally, the Commission proceeded to establish a world-wide organization of relief. This it accomplished by entering into relations with existing committees interested in the same object, and by setting up new or stronger committees in localities where such were needed. These committees asked for and received large donations in cash and kind; but perhaps an even greater benefit to Belgium was represented by their management of the vast commercial transactions on which the feeding of that country mainly depended. So successful were they in their appeal to the public that the ablest and most experienced men in each district gave their services gratuitously, with the result that the whole operation of purchasing foodstuffs, collecting them in local depôts, and preparing them for transmission to Belgium, was carried out at an administrative charge of under 1 per cent. Such economy would not



PREPARING CLOTHING FOR DISTRIBUTION.

have been possible had not the committees been granted liberal concessions in harbour dues, railway rates, and so forth. It was considered essential that there should be no overlapping of functions; each committee was made independent within its own sphere, and to that its activities were confined; and further to stimulate local interest, it was decided that, so far as it was economically practicable, money raised in a district should be expended on the products of that district. Where this method would have been too costly the money was handed over to the Commission to be employed at its discretion in more suitable markets. The foodstuffs purchased in this way were credited to the Benevolent Department free of transportation and administrative charges. In addition to appealing for money and expending it to the best advantage, and to transmitting free of cost all donations in kind, the Benevolent Department maintained a large central clothing establishment in Brussels. Here no fewer than 5,000 people were employed in the renovation, classification, and distribution of clothing, a large part of which had been received as gifts. From this centre consignments were distributed by motor trucks to the provinces and communal committees.

But it is not possible to set down here all the good offices discharged by the Benevolent Department, for it gave advice and assistance to countless committees—among others to the Belgian Orphan Committee which took charge of 18,000 children.

It remains to consider the personnel of the Benevolent Department. In the collecting areas it consisted, as has been said, of experienced and influential men and women who willingly gave their services to the committees; these were drawn from all classes of society among the nations which were neutral or allied with Belgium. In and in the neighbourhood of the distributing area the choice of agents was restricted; the subjects of foreign States at war with Germany were not admitted within the occupation zone, and here the benevolent work was discharged by Belgians and by neutrals. In the nature of things more freedom of action was allowed to the latter, and a special tribute is due to the energy and initiative shown by Rhodes Scholars and other young Americans. The Commission carried out to the full the idea of mobilization; it called upon the rich for their money, upon the able for their brains, and upon the young for their sinews; what it introduced was in effect the conscription of the benevolent.

We have not attempted more than a sketch of the magnitude, complexity, and importance of the work performed by the Commission, nor can we here describe the activities of the Commission in the occupied area of France, where it succoured two and a half million people. Enough, however, has been written to indicate what manner of service was rendered to humanity by Mr. Herbert C. Hoover and his colleagues, and by the municipal authorities of the Belgian Communes. Those Eastern peoples who conceive the Deity as being at one and the same time Creator, Destroyer, and Preserver would deem that He had revealed Himself in the second capacity in the German Armies and in the third in the relieving host which sprang up in their track. We, for our part, can imagine the generation that made this war pointing for its *Apologia* to the work of the Commission.

BELGIAN REFUGEES IN A VILLAGE OF TENTS.

CHAPTER LXXVIII.

THE BELGIAN REFUGEES.

The Belgian Flight to England—Magnitude of the Exodus—Registration Statistics—The War Refugees Committee—Organization and Relief Work—Housing Arrangements and Hospitality—Alexandra Palace and Earl's Court—The Blackpool Scheme—Employment Problems and their Solution—The Belgian Refugees in Holland—Dutch Hospitality—Government Measures—State and Municipal Relief Work.

THE refugee has been for centuries a familiar and honoured figure in English social history. From the revocation of the Edict of Nantes, through the French Revolution and the wars of 1848, down to the recent constitutional struggle in Russia, there have been migrations which have brought to our shores by thousands or by hundreds the victims of civil war or religious persecution. There is little save the name refugee in common between these fugitives and the Belgians who found shelter in England. In these earlier movements the numbers involved were relatively trivial, and the largest migration, that of the Huguenots, was spread over many years. These earlier exiles were, moreover, usually men above the average level in education and social standing. They were the leaders rather than the rank and file—men whose parts or birth or conspicuous record of service to a beaten cause had brought them into danger to life or liberty. The Belgian migration stands without a precedent in the modern history of Europe outside the Balkan Peninsula. Every war involves some incidental destruction of houses, or even of villages, within the actual war zone. But no European war, west of Belgrade, has ever since the seventeenth century involved the flight in masses of entire populations. It was not simply the inhabitants of burned villages, still less was it the leaders of a national resistance who sought shelter in England. The Belgians who began to come into Folkestone in the latter days of August, 1914, and then to pour in streams and floods through the autumn and winter, were simply a fraction of the whole nation, taken as it were in section.

There were some wealthy families, and many professional men, but the multitude was drawn from the working class, and every trade was represented, from the peasant in his wooden sabots and the dock labourer of Antwerp or Ostend to the postal employé, the railway servant and the skilled mechanic. Some had left behind them their burned village or the flaming streets of Louvain. Some had seen husband or wife or child butchered before their eyes. The majority fled from the reputation which their conquerors had sedulously made for themselves. Some came in haste, the women with a shawl on their heads and their working-aprons round their waists, carrying nothing but their babies in their arms. Others set out with as many of their possessions as they could carry, and one sometimes saw a father struggling under the burden of a mattress, while the mother carried a cradle and the little children had each a pot or pan. They reached Folkestone, Tilbury or Hull in every kind of ship, from the yacht and the smack to the mail-packet and the big "tramp." It would be difficult to exaggerate the mental and physical misery of those who arrived in the early days

GERMAN WARFARE!

of the migration. Behind them was a fatherland submerged by a brutal invasion, a home destroyed and all the ties of work and custom violently broken. Before them was an unknown land of alien speech, strange habits and heretical religion, and the fate of the exile. The journey to Folkestone through Ostend had often been a pilgrimage of perils and hardships. The terror of a German pursuit followed them, and rumour had sometimes lashed their fears into panic. It was the fate of thousands to pass through Ostend after all its normal life had collapsed. The shutters were up in the shops, the hotels abandoned, and even when they had money in their pockets there was neither food nor rest to be had. They waited with their bundles on the quays through a night or a day, until at last a boat bore them to safety. They landed in the last extremity of mental depression and physical exhaustion. Babies were born during the flight. Some families had brought with them an aged and almost bedridden grandparent. The children, who began soon after their arrival in England to regard their experiences as an exciting and delightful adventure, were at this stage perhaps the worst sufferers of all.

The problem of dealing even with a few families who reached a foreign country in this state would not have been easy. It was the magnitude of this migration which put the goodwill and organization of English hospitality to the severest test. The first comers were chiefly people who paid their own way, and landed with enough money to provide for themselves for at least a few days or weeks. The destitute began to arrive before the end of August, and through the first fortnight of September they reached London at the rate of nearly 500 persons daily. The fall of Antwerp turned the stream to a flood. One steamer alone carried over 2,000 refugees. In one day as many as 11,000 Belgians reached Folkestone harbour, though the number which could be landed was much smaller. In the week which followed the fall of Ostend no fewer than 26,000 Belgians arrived in Folkestone, among them great numbers of wounded soldiers. By the end of November, 45,000 destitute refugees had been received. Over 12,000 came in December, and then month by month the totals gradually dwindled, till they fell in April to the manageable number of 4,642. The later arrivals all came from Holland, and the migration, which fell in the summer of 1915 to about 2,000 per month, was carefully controlled, and was confined to competent workmen who were certain to find employment.

The figures can be given with an approach to accuracy. Since registration was made compulsory for all Belgians, and the work undertaken by the police, a detailed census was prepared by the Registrar-General's department at Somerset House. The stacks of shelves were gradually filled up with a skilfully devised card-index, on which were shown the name, age, and sex of every Belgian who had reached England, his home in his own country, his occupation, and his new address. Another card-index, grouped first by police-areas in England and then by occupations, classified according to trade and profession the Belgians who were to be found in any given district. The double register served several important purposes. It supplied reliable statistical material for the use of the Local Government Board, the department which controlled the whole formidable problem. It assisted the Labour Exchanges in finding employment for the refugees. It was used to enable the Belgian Government to enforce the obligation of military service on the unmarried men between the ages of 18 and 25. It was, finally, placed at the disposal of refugees who were searching for lost friends or missing relatives. As many as 20,000 letters of enquiry were received in one crowded day when this inestimable facility was first placed at the disposal of the refugees, and in one week as many as 4,000 searches were undertaken.

The totals which emerged from the register at Somerset House were sufficiently impressive. The number of fugitives who had arrived from Belgium up to the beginning of June, 1915, was approximately 265,000. Of these 205,000 were represented by the cards of resident refugees. The wounded soldiers numbered another 40,000, of whom 18,000 were in this country then; the remainder had returned to the front. Adding another 10 per cent. to cover the inevitable gaps in the register, the total of about 265,000 arrivals was reached. Of these some 15,000 were not Belgian subjects; they were mainly Russian Jews engaged in the diamond-cutting industry of Antwerp. Of these over 6,000 were cared for entirely at its own cost by the Jewish community of London. A further deduction must be made for 10,000 refugees, chiefly men, who were known to have returned to Belgium, mainly as

A WOUNDED REFUGEE AND FOUR CHILDREN FROM LOUVAIN.

a result of the tax which the municipalities under German pressure levied on the property of absentees. The register further showed that 5,000 had joined the army since its compilation was undertaken, but the actual number must be much greater. It results from these calculations that the number of Belgian refugees in England at the beginning of June was about 211,000. Of these 51,000 were men over the military age of 25, while 80,000 were women and girls over 16 years. The children numbered 20,000 babies under five years, and 46,000 boys and girls under 16 years. The margin is made up of 6,000 lads between 16 and 18 years, and 8,000 young men of military age (18-25) who were either married or unfit for service, or were about to be enlisted. To visualize what this sudden migration of 265,000 Belgians meant, one may imagine that by some sudden catastrophe a large city of the size of Newcastle-on-Tyne had been suddenly razed to the ground, and its population, rich and poor, turned adrift in utter destitution.

The news that Belgian refugees were beginning to arrive in England found us absorbed in our own needs, and might well have failed to evoke a prompt response. The idea of preparing for the reception of Belgian fugitives came to two groups of people almost at the same moment. One recalls with an effort that on the eve of this European struggle the shadow of civil war was hanging over Ireland. Among its other arrangements to resist the Home Rule Bill, the Ulster organization had prepared for the possibility that large numbers of non-combatants might have to be removed from the area of fighting in Ireland. The women's organization of Ulster had quietly arranged for the reception of these fugitives in sympathetic homes in England. It had its lists of hosts ready, and its printed forms on which each of them was asked to state how many of these Irish refugees he would be willing to house. It occurred to Lady Lugard, who knew something of these preparations, that this machinery might be placed at the disposal of the Belgians. The leaders of the Ulster organization gave a ready assent, and by way of obliterating every trace of the feud in which these preparations had originated, the heads of the Catholic Church in England were promptly asked to give their approval and cooperation. It was realized at once that the work must be above party, and a committee was formed, largely through the exertions of Mrs. Alfred Lyttelton, for which Lord Hugh Cecil acted as chairman and Lord Gladstone as treasurer. The Earl of Lytton, who had helped to organize the British sections of the Brussels and Ghent Exhibitions, had meanwhile taken an independent initiative. He had collected contributions towards a relief fund from the exhibitors, and a representative of the Exhibitions Branch of the Board of Trade had visited Ostend to study the needs of the refugees there.

The first public appeal from the War Refugees Committee appeared in the newspapers of August 24. It asked for hospitality, for money, for clothes, food and personal service. The response was magnificent and instantaneous. More than a thousand letters offering hospitality arrived in the first day, and these offers poured in on the following days, till in one day alone 5,000 letters and 1,200 callers reached the offices of the Committee. Within a fortnight it had at its disposal hospitality for 100,000 refugees. This was much more than a response to a call of duty, and it was prompted by something finer than pity for distress. Everyone who thought at all, knew that Belgium was bearing the brunt of an invasion which was an offence against the public law of Europe. Everyone realized that by a geographical accident Belgium had incurred the hostility which was aimed at greater Powers. If we in one sense were fighting her battle, she, with no stake in the game but her own honour, was fighting ours. Everyone realized the immense military service which her prompt and stubborn resistance had brought to the Allied cause. If these offers of hospitality meant pity for the homeless, and indignation at their unmerited sufferings, they also meant admiration for a gallant little nation, and above all, gratitude for what it had done. They came from every part of the United Kingdom and from every class of the community. Many a working-man offered a share of his cottage to a comrade from Belgium, and groups of neighbours combined to share the responsibility of feeding and housing one or more families. A purely official scheme could never have found scope for this generous feeling, and the mere giving of money would have been a poor means of expressing it. The people who made these offers intended to give food and clothing and house-room to the refugees, but they wanted to do much more than that. They wished to be in intimate personal touch with them, and to express in the daily care of a host the gratitude and sympathy which they felt towards a whole nation.

The immediate problem before the War Refugees Committee was, however, not so much how best to organize this hospitality as how to meet the urgent wants of the refugees who were arriving first in hundreds and then in thousands daily. They arrived starving, tired, and often ill, and the most perfect

FROM ANTWERP TO ENGLAND BY BARGE.
Two barges from Belgium at a Thames-side wharf. Two families are living on each barge.

IN KENT.
Refugees Hop-picking.

organization could not have sent the family which landed in Folkestone, without an hour's delay to a host in Yorkshire or in Glasgow. The refugee frequently required rest, sometimes medical attention, and usually stood in need of some article of clothing. A system of temporary receiving depôts had to be built up, and transport must be organized in all its complicated details. The hosts who came in under the Ulster scheme had offered to house women and children only, but the Belgian women refused to be separated from their men. These offers had all to be revised by further correspondence; the good faith and respectability of the hosts had to be tested by some system of references, for there was always the risk that the offers might be made by some selfish or evil people whose object was to exploit the refugees. Finally, the delicate task had to be undertaken of allocating each Belgian to a suitable home. The Yorkshire miner or the Lancashire weaver who had generously offered a room in his own cottage wanted to show kindness to someone of his own class. The professional man hoped for a guest of his own degree of education. Where a group of neighbours had borrowed or hired an empty house and furnished it for the reception of two or three families, it was obvious that these should be more or less of the same class, and, if possible, neighbours or relatives or friends. There was no time to waste on these delicate problems, and the allocator had to do the best she could to guess from the general appearance of a Belgian family before her to which of the homes sketched in a few bald words on a stereotyped form she had better send it.

In the first, which was also the most difficult stage, the whole of this exacting and complicated work was carried out by volunteers. It was an undertaking for which no precedents existed, and no mechanism was ready made. The founders of the Committee were themselves without any similar experience, and their helpers were chiefly women who gave time without stint, zeal without measure, and devotion which would face any task, but they worked for the most part under the handicap of a lack of any business training. They set to work in the offices in Aldwych empty of furniture, and the Skating Rink close at hand, which served as day shelter, luggage depôt, refreshment-room, and club for the refugees. was simply a blank space with a roof over it. It took time to evolve order and method. There was considerable delay before the vast accumulations of correspondence could be dealt with. A capable staff of paid workers with a business training would have evolved method rather more rapidly and made fewer mistakes in detail. But it is also true that only a corps of volunteers, who were giving from the single motive of sympathy and gratitude, could have impressed the Belgians on their first landing as these workers did, with so warm a promise of welcome. The office routine in these early days may have been open to criticism, but whoever suffered from that (and the chief sufferers were the devoted workers themselves), the Belgians lacked for nothing. Their material wants were always met, and they were from the first in the presence of people whose bearing reflected the feeling of the country to which they had come. Those who saw anything of the refugees in these early days heard much from them of the care spent on the provision of the more elementary comforts, but they heard even more of the charm and kindness of these volunteer workers who met them at the port, piloted them about the stations, enrolled them in the register, and saw them safely housed in a temporary shelter. It was much that the nation's hospitality should have been adequate and ungrudging, but it was morally no less important that it

should have been given with grace and with that sympathy which saves the recipient's self-respect.

In spite of the novelty of the work, these volunteers achieved some remarkable feats of rapid improvisation. The local committee of Folkestone, under the supervision of Mr. Basil Williams, bore the first brunt of the migration. It had to meet the exiles as they landed, provide them with a hot meal, attend to the sick and the wounded, house as many as the resources of Folkestone would accommodate, and then attend to the wants of the thousands who went forward by train to London. The first task was to provide temporary shelters for the destitute refugees on their arrival. The Borough Council of Camberwell met the first demand by housing a hundred Belgians in Dulwich Baths. One instance must suffice of the prodigies of organization which the War Refugees Committee had to perform. At eight o'clock one evening it took over an empty shirt factory near Victoria Station which the Army and Navy Stores lent to it. It was clean, sanitary, but stark empty. The Stores supplied beds at cost price. The Rowton Houses lent crockery and linen. By three o'clock the next afternoon the beds were made up, a kitchen installed with eight big stoves, the tables were laid, and a hot dinner awaited the first batch of 250 refugees.

The migration soon passed the bounds within which private initiative could cope with it. Hospitality was available for about 100,000 persons, but the totals eventually exceeded a quarter of a million. It raised from the first all manner of problems which the Government could not ignore—public health for one thing, and the reaction upon employment for another. There was, again, the certainty that German spies would come disguised as refugees. It was clear that for our public credit, and even for our public safety, the Government must in the last resort assume control of the problem. The responsible department was the Local Government Board, and on September 10 Mr. Herbert Samuel, on behalf of the Government, offered to the Belgian refugees the hospitality of the nation. This was at once a pledge and an invitation, and it had, and was designed to have, the effect of increasing the stream of arrivals. It was the policy of the Government to encourage private initiative and generosity to give its utmost. It wisely left the War Refugees Committee to manage the work which it had undertaken with so much public spirit. It expected the individual hosts and the local committees to continue to give to the best of their capacity But the element of anxiety which belongs to all such work was removed. In case of need the resources of the nation stood behind the Committee. One consequence of the new departure was that the Committee was now able to engage efficient paid labour for its clerical and routine work, and its offices soon became a model of exact and even elaborate organization. The position of honorary secretary, who was, of course, a chief of the Staff, responsible day after day and every day first for the creation and then for the running of a very complicated mechanism, was held for a short time by Mr. H. E. Morgan and Mr. Hennessy Cook, and then through the greater part of the Committee's period of life by Mr. Algernon Maudslay, who had been from the first among its most active volunteers. Lord Gladstone was something between a responsible Minister and a managing director. Lord Lytton had under his control and daily management the whole work of dealing with the local committees, which soon numbered 2,000 all over the country. Mrs. Alfred Lyttelton and

REFUGEES AT ALEXANDRA PALACE.
John Verscheuren and his wife, who lost their home at Louvain.

Mrs. Gilbert Samuel were in charge of the delicate work of allocating the refugees to their temporary homes, and re-allocating them when "misfits" had to be readjusted, or when an offer of hospitality came to an end. A Committee of Management, on which Mr. W. H. Dickinson, M.P., and Mr. A. Allan, M.P., sat with Lord Gladstone, Lord Lytton and Mr. Maudslay, co-ordinated all the many departments of the Committee's activities. As one might see it at work in the summer of 1915, it was a hive of methodical and orderly industry. In one room of its spacious offices a card-index kept the record of every refugee, and another the offer of every host. The finance department checked by a simple but effective system of duplicate counterfoils the weekly payments made on behalf of every refugee. Many hosts and a large number of local committees still provided entirely for the maintenance of their refugees, but where the Committee was the dispenser of the nation's hospitality, the general plan was to pay a "flat rate" of ten shillings a week for adults and children alike. A department of education originated by Lady Gladstone arranged for the reception of from two to three thousand Belgian children in English schools, colleges, or convents, usually as free guests or at nominal fees, and to it fell not only the arrangements for their reception and travelling, but also the provision of French or Flemish-speaking teachers. A health department made supplementary grants to the sick and arranged for their reception in case of need in hospitals; but indeed, in all such matters, the arrangements were pleasantly easy, for doctors almost always gave their services; institutions admitted refugees either free or on very favourable terms. A free dispensary at Aldwych attended to the ailments of the refugees in London, receiving up to June, 1915, 6,425 visits from its patients, and supplying 179 surgical appliances, not to mention spectacles and artificial teeth. Four nurses were constantly engaged in visiting the sick in London, while eight worked at the dispensary. A hospital in the neighbourhood under the Local Government Board received the more serious cases. The hardest and most complicated work was that which fell to the transport department. It was organized by Mr. Henry Campbell, an official of the London General Omnibus Company, and it had to arrange for all the details of the reception of the refugees at the London station, their conveyance first to a shelter and then to their ultimate destination, to provide interpreters, and arrange for the supply of food *en route*.

[Elliott & Fry.

MR. BASIL WILLIAMS
(War Refugees Committee).

The Committee had to scheme not merely for working-class refugees, but also for exiles of the middle classes, who were sometimes wholly without means, and much less likely than those of the artisan class to find employment. For their needs flats were taken in model dwellings in Battersea and Brixton. The rents varied from 6s. 6d. to 15s. 6d. a week, and a reduction was secured which saved about a shilling a week. Furniture had to be bought for each flat, and the Committee managed to secure for an average of £20 what would have cost in the open market as much as £32. These suites of furniture were hired to the refugees at charges which in nine months would cover their cost. In some cases these better-class refugees were self-supporting; in others they received either partial assistance or maintenance at the full 10s. rate for each member of the family. The scheme enabled them to live simply and economically, while it kept the family together and gave it even in exile the decencies and privacy of home-life. About 1,100 persons were housed in London under this flat scheme. For other middle-class refugees, to the number of about 400, eleven hostels, conducted like private hotels or large boarding-houses, were organized by Lady

[Swaine.

THE RT. HON. HERBERT SAMUEL.

Lugard. The provision of food was organized by the National Food Fund. It received generous gifts of food from Colonial Governments and from English firms; it was able to purchase large quantities at very low rates, and by a daily system of supplies it enabled the Belgian tenants of the flats to live on their modest allowances. Not the least important of the Committee's activities was a clothing department, under Lady Emmott, supplied mainly by free gifts, which distributed over a million garments and boots to the refugees.

At the Skating Rink in Aldwych these schemes as they came into actual contact with the refugees might be seen in operation. Behind a barrier near the entrance stood piles of the refugees' luggage, labelled and arranged. At a busy counter a *poste restante* was at work, and to it fell the task of searching for missing relatives. In one section clothing was being delivered under a careful system of checks. In an office the allocators were interviewing difficult cases, endeavouring to decide what was to be done with refugees who in one way or another had given trouble to their hosts, or providing for them when hospitality had been exhausted. It was a delicate task, and the presence of the inevitable proportion of "undesirables" and "shirkers" among them called for alertness as well as tact. Behind one partition the Belgian Government had its recruiting office. A large space was occupied by the Labour Exchange, at which every Belgian had to be registered. Notices in Flemish told him what trades were calling for labour, and printed instructions reminded him that he was expected to stipulate for the standard English rates of pay. Another pen was an estate office, where particulars were given about vacant flats, and attractive illustrations showed the furniture which might be hired. A kitchen and restaurant provided free refreshments against checks for refugees who were visiting the headquarters on necessary business. At the doors one might usually see a private motor-omnibus waiting to convey a party of refugees to a station, or to one of the temporary shelters; while soldiers in Belgian uniform and hawkers selling the Belgian newspapers completed the suggestion of a foreign colony on English soil. The Rink was a quiet and methodical place in summer, which reflected the spirit of an organization that had long ago established its well-drawn lines of work. In the early days of the movement it was a shelter thronged with all the multitudinous needs and tragedies of Belgium. So crowded was it that movement through the press was difficult. Tired mothers sat on benches endeavouring to pacify little children who dimly understood that they had passed from danger to discomfort and fatigue. Voluble workmen discussed in Flemish the chances of employment and the mysteries of English trade unionism. Neighbours separated for long weeks met by chance and poured out their questions as to the fate and whereabouts of friends. Here and there were little parties of better-dressed people talking French, and one guessed from gesture or manner or the fragments of their conversation the world from which they came. A singer was talking of charity concerts, a lawyer of the hospitality of the Temple Common-Room, a doctor of the queer legal obstacles to practice in England.

It is time to follow the refugees in their progress from their arrival in England to their installation in permanent quarters. The first stage was their reception in temporary shelters which served to house them for a few days while more lasting arrangements were made for them. The responsibility for providing for them at this stage fell to the Local Government Board, acting through the Metropolitan

Asylums Board. It housed the greater number of the refugees on their first coming to England, first at the Alexandra Palace and afterwards in the Exhibition buildings at Earl's Court. These refuges could hold as a maximum about 12,000 persons. The work, both of the Board and its officials and of the volunteer committees of ladies which cooperated with it, was as generous as it was capable. They were not content merely to provide a clean and warm shelter and good food. They contrived, in spite of haste and the vast scale of the migration, to complete their arrangements with a certain grace, and to create in all they did an atmosphere of welcome and sympathy. The first impression which one received in one of these big refuges was that a great assemblage of very jolly children was indulging in a peculiarly exciting picnic. Every little girl whom one saw in the grounds seemed to have a doll in her hand, and boys and girls alike were romping in the big pleasure grounds with no apparent thought of regret for the crowded streets of Antwerp. The spacious Exhibition

[*Elliott & Fry.*

VISCOUNT GLADSTONE
(Committee of Management, War Refugees Committee).

[*Russell.*

MR. W. H. DICKINSON, M.P.
(Committee of Management, War Refugees Committee).

rooms at Earl's Court had been converted into airy dormitories. Hundreds of beds stood in orderly rows, with spotlessly clean sheets. The big central hall was a dining-room. Belgian chefs were preparing a savoury stew, chiefly composed of the good food sent as a gift by the Australian Commonwealth, and bakeries with Belgian bakers were making the best use of Colonial gifts of flour. A spacious reading-room and a big sewing-room occupied the refugees in their spare time, and painted friezes round the walls bespoke the wish of a guild of women artists to give pleasure to their eyes. For the children there was a well-equipped school-room, and for the babies an up-to-date *crèche*. In the laundry the women were busily washing and ironing their own clothes. A little theatre had been consecrated and fitted as a temporary chapel. The pleasantest place of all was the "Welcome Club," open, sunny and gay with flowers, which made in its garden a perfect hospital for the sick.

After three or four days in Earl's Court or Alexandra Palace the refugees were drafted off to other quarters. At first these were found chiefly by private hospitality. They entered private houses as guests, or were accommodated in a gate-house or gardener's cottage. Such arrangements were sometimes permanent, but they usually lasted only for a few months. Much the better plan was that which the local committees usually adopted. Houses were lent or hired, and spare furniture contributed; tradesmen were usually generous with supplies, and the little colony enjoyed the collective

AT THE ALEXANDRA PALACE.
The Belgian Minister thanking the Queen on leaving the Palace.

hospitality of the whole neighbourhood. There were cases in which the working people of a village, none too prosperous themselves, clubbed together and contributed a shilling weekly to maintain a Belgian family among them. The advantage of this plan was twofold. In the first place the refugee was surrounded by friends; in the second, he enjoyed a very fair substitute for home life, and even if the man failed to find work, the women, at least, had their usual occupations. What villages and small towns did for half a dozen or a score of refugees the big towns did for thousands. Glasgow, with some financial aid from the rest of Scotland, took the entire charge of 10,000 refugees, and this in addition to subscribing £130,000 to the official Belgian fund for relief in Belgium. It had in one big house as many as 150 refugees, but it usually followed the plan of housing each family separately in a small flat of one or two rooms and kitchen. It provided furniture on a modest scale, paid a quarter's rent, and told the refugee, usually with good results, that it expected him, when he had found his footing in his new surroundings, to be self-supporting.

There were limits, however, to the number of refugees which even the big towns could absorb. In many districts the needs of the new armies made it impossible to accommodate refugees. As the migration increased, a new policy was devised to deal with it. The refugees were sent, first in hundreds and then in thousands, to seaside resorts, where it was easy to find quarters for them in boarding-houses at the flat rate of 10s. a week provided by the central funds. The watering-places of Devonshire and North Wales were, with Blackpool, the places selected. This plan had certain obvious advantages. The refugees were placed in pleasant and healthy surroundings, and the children, at least, would certainly have voted for this new policy. It came, moreover, as a boon to these districts, which had suffered heavily by the outbreak of war at the height of the holiday season. These boarding-houses usually lie idle during the winter, and to secure them for the refugees was sound economy. When this policy was adopted no one hoped that any large number of refugees could be absorbed by our industries, nor was it generally realized how long the war would last. Experience showed that this system had grave defects. These seaside resorts had no industries, and with the best of goodwill it was only a small minority of the men who could find work there. Blackpool, for example, with 2,090 refugees, had by June, 1915, found work only for about 200 of both sexes, a few on the railway, some as

A LITTLE REFUGEE.
Written on the label, which is fastened to the child's dress, are the words "To be sent to Shrewsbury."

REFUGEES AT ALEXANDRA PALACE.
Boots and shoes provided by Americans.
Inset: The women's clothing department.

military tailors, and about fifty in work under an Urban District Council. In any big industrial centre they might have been absorbed much more easily and in much larger numbers. If there was little employment for the men, the women were hardly better off. In a Glasgow workman's dwelling they would have been fully and happily occupied in all the usual work of the home; at Blackpool they were only pensioners. Some of the refugees may have found prolonged inaction pleasantly demoralizing, but the joys of life in a seaside place when one's purse is empty may well be exaggerated. The demoralization, such as there was, was certainly not serious, for in four months these two thousand refugees, many of them labourers and dockers, had provided only half a dozen minor cases for the police. The better type among the refugees in all classes undoubtedly chafed at the enforced idleness. A reading-room and club which they managed, with the help of English friends, to open early in June, did something to relieve the mere boredom of this existence. There were other difficulties which the most vigilant committee could not entirely overcome. The comfort of the refugees depended mainly on the landladies, who were at the best accustomed to cater for people of different tastes and different social habits. Some behaved with the utmost kindness and generosity, in the spirit of one of them at Blackpool, who said: "This is 'my bit' for the war." The majority, under careful inspection, attended to the wants of their strange boarders reasonably well, and grew accustomed, as one of them put it, to "their parlez-vous ways." The unpleasant cases of exploitation—it is on record that one landlady thought a pound of meat a day sufficient for nine Belgians—were promptly dealt with by the ladies of the volunteer visiting committee. There was always some risk of overcrowding, and refugees of various classes were sometimes mixed together. The rate of payment for each refugee was, after some experience, raised to 11s. The work of administration was arduous and sometimes anxious. An average of sixty refugees changed their quarters every week. Clothing had to be provided, and boots supplied and repaired. A Belgian doctor was appointed by the Committee, and the local chemist supplied his patients at Insurance Act rates.

As usual, the happiest section of the refugees were the children. They enjoyed the prolonged stay at the seaside. The new life around them was stimulating and always interesting and

strange. They learned English much more quickly than their elders, and spoke it as a rule with but a slight foreign accent. The children, indeed, would often talk it fluently while their parents had picked up only a few of the most necessary words. For most of those in Blackpool school life went on almost normally. Two elementary schools were set apart for their use. In one of them, which about 250 children attended, the instruction was given in Flemish by Belgian sisters. In the other, a secular school with about eighty children, qualified lay teachers were provided. More enterprising and adventurous were the fifty children who took their chance in the ordinary elementary schools of the town. They did very well; they seemed to be popular with the other children, and they learned English easily and quickly with very little help. Twenty children from middle-class families were received as free scholars in the secondary school, whose headmaster, Mr. Turrell, was one of the most active members of the Committee. Their teachers spoke of them with enthusiasm, though they were less advanced in most of their studies than English boys and girls of the same age. They were able, after a few months in England, to write a fairly correct essay without help or preparation. A set of essays comparing school life in England and Belgium made interesting reading. All the children dwelt on the advantage of our games. Some were delighted with the practical work in science. Two or three remarked that Belgian masters were more "severe" than English, and another put the same idea more prettily by saying that "here the teachers are good friends with their pupils; they can make us like them, that is the reason why we look after ourselves to please them." A thoughtful boy concluded his comparison with this verdict: "I believe that the English instruction really prepares the children for their later life in the society, while our schools give them rather a more theoretical breeding." Gratitude struggled in the mind of the writers with home-sickness. One girl wrote cheerfully: "As for me, I feel so happy here that I forget this horrible war." A boy of fifteen naïvely combined the two emotions in this peroration: "I like this school, and I like all Englishmen, our brave Allies, but how happy shall we be when we can

DINNER-TIME AT THE ALEXANDRA PALACE.

go to Belgium, or, better, go back to what is left of Belgium, our dear, dear native land."

When the Belgian emigration first began, the dominant thought, indeed the only thought, of those who undertook their care, was to provide for their subsistence and their comfort. It was, of course, realized that it would be well for their own interests that they should find employment. They are an industrious race, and no self-respecting refugees would wish to accept hospitality, however delicate and generous it might be, if it were possible for them to become self-supporting. From our own standpoint, moreover, the need for public economy in war time was sufficiently obvious, and the memory of earlier migrations which had brought skilled workmen and new methods to English industry suggested also that we might ourselves have something to learn from our Belgian guests. Their reputation in intensive agriculture, for example, stands high, and it is in this department that our own practice is peculiarly backward and wasteful. There were, on the other hand, two sets of considerations which conspired for some months to drive the problem of employment into the background. The first of them was the uncertainty how long the war would last. If it were to be over in six months it clearly would be a waste to incur capital expenditure in providing the refugees with work. If it were to last for one or two years it would be a sound economy to spend a good deal in finding productive labour for them. The uncertainty meant inevitably that at first the more cautious alternative was chosen, with the result that the distribution of the refugees, undertaken under the pressure of urgent need, bore no relation to the problem of employment. Five thousand or more were sent to seaside places, for the obvious reason that there was room for them there. Countrymen found hospitality in towns, and townsmen with no experience of country life were provided with homes in the country. Even where large numbers were sent to busy industrial towns it was not possible during the tremendous rush of the autumn and winter to select them to suit the trade of the district. If all the refugees who knew anything of textile trades had been collected and sent to Bradford they might have found work within a few hours of their arrival. But textile workers were scattered all over the country, and Bradford received a chance assortment of men and women of every trade and class. In the conditions that prevailed during the autumn of 1914 no other system was possible.

The second set of considerations had an even more fatal effect in the employment of the refugees. No one knew how long the war would last and it was thought that it would create for this country immediate problems of unemployment and distress. There was, it is true, in the first weeks a serious dislocation of trade and finance. Women's labour suffered heavily, especially in the luxury trades, and some small groups of educated workers, especially artists, were in real distress. But as the war went on it was realised that, so far from there being any abnormal unemployment, the difficulty was, rather, in several vital trades, a great dearth of labour. That

THE MEN'S CLOTHING DEPARTMENT AT THE ALEXANDRA PALACE.

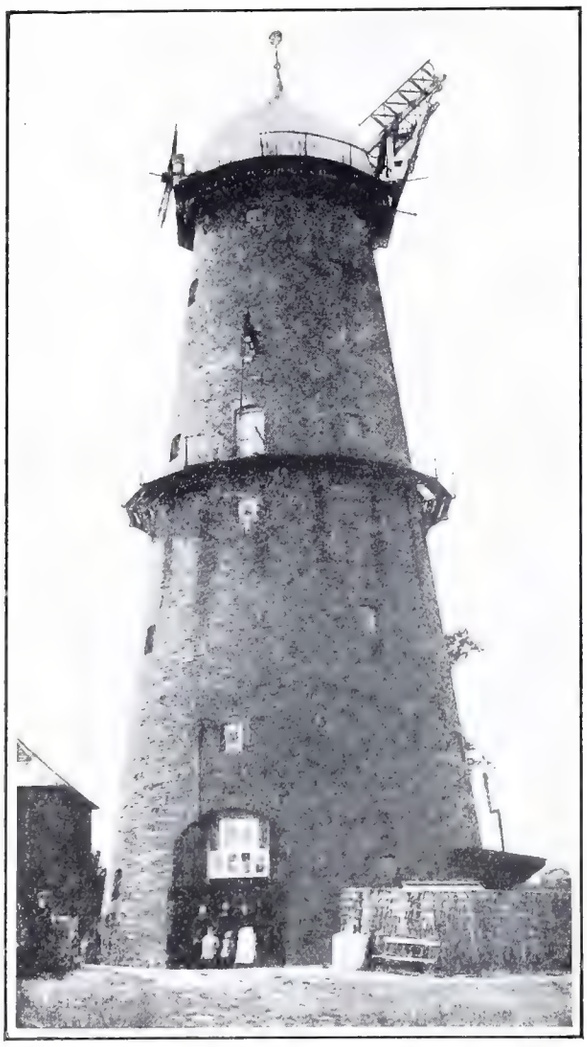
THE HUGE DORMITORY AT THE ALEXANDRA PALACE.

discovery came too late to benefit the great mass of the refugees.

A Departmental Committee nominated by the Local Government Board sat in November to consider the employment of the refugees, and a central authority under Sir Ernest Hatch and Mr. Leggett (afterwards absorbed in the Aldwych organization) was created to watch over their interests as workers. The report of this Committee, issued in December [Cd. 7750], reflected this early attitude of pessimism. Most of its recommendations would, indeed, have been sound in any circumstances. To save the refugees from exploitation it was well to lay down that all offers of employment should pass through the Labour Exchanges. Clearly work should be offered only when there was a deficiency of British labour, and then only at standard rates of pay. Unmarried men of military age, fit for military service, should also be ineligible, since the Belgian Government had called for volunteers. The Committee divided the refugees into three categories: (1) Those qualified for industries in which labour was short—armaments, glass, wool, coal, motor works and agriculture; (2) Other manual workers; and (3) Professional men, civil servants, teachers, clerks and artists. It rightly came to the conclusion that the first class ought to be able to find work, and that for the third class there was very little hope. It was too pessimistic about the chances of the second category. They proved to be much more adaptable than was expected, and the demand for labour was urgent enough to have absorbed all of them, and more than all of them, if the special difficulties of their position could have been overcome. The Report suggested a redistribution of the refugees, in order to bring those who could work to the districts which needed them; but it laid no stress on this indispensable preliminary, and there were serious difficulties in practice. Complaints were often made that men who could work refused offers, and such cases did occur at Blackpool, for there was a demand in the Lancashire chemical industry for unskilled men at 25s. or 30s. a week. One man is said to have dismissed all offers of work with a magnificent gesture, and the reply, "But I am the King of England's guest." The refugee's standpoint was, on the one hand, that he did not care to leave his family in a strange land, and, on the other, that he could not maintain a wife and several children on a wage of 25s. in furnished lodgings. There may have been some "shirkers" among those who refused offers of work, but the problem of living was really serious. The price of lodgings rose to extravagant and almost incredible figures precisely

in those places where the demand for labour was the most urgent. At one time no less than 18s. was charged for a single room at Coventry. To meet such difficulties as this it would have been necessary not merely to "re-shuffle" the refugees, but also to make a lodging allowance, or else to hire furniture, so that the Belgian family could live as an English family would do. It is a dangerous policy in any form to make grants-in-aid to wage-earners, and English trade unions might have resented it; but, on the other hand, a Belgian family without furniture in strange surroundings was in an exceptional and unenviable position.

There were other restrictions which pressed hardly on the Belgians. Prohibited areas were in principle closed to them, and these were often the busiest districts. The risk of espionage caused them to be forbidden work about the docks. The difficulty of language was a serious handicap, for many refugees spoke Flemish only, and the miners' unions, in spite of the shortage of labour, held, perhaps wisely, that men ignorant of English could not safely be employed underground. About six hundred miners were, however, employed in surface work at the pits. The Belgian fishing fleet went to Milford Haven, and did well there, while our own trawlers were kept busy in patrol work. The interesting suggestion that Belgians might be employed in intensive agriculture did not prove practicable on a large scale, for the reason that peasants formed a relatively small proportion of the refugees. The general position was, at the beginning of June, 1915, that about 20,000 Belgians had found work through the Labour Exchanges. A large number undoubtedly found it in other ways, often on unsatisfactory terms. Of the total refugee population (211,000), one-third, or roughly 70,000, were employed, or, in technical language, "gainfully occupied," in Belgium. This meant that about 50,000 (subject to deductions for unofficial agencies), who presumably might have worked, had failed to find employment. Many of these, however, belonged to callings or professions whose case here was quite hopeless. What, for example, could be done for 105 wine merchants? It is surprising and creditable that as many as sixty lawyers found work of some kind. The educated men often set a really heroic example to the others; in Blackpool, for instance, a university lecturer took work in the tramway sheds.



AN OLD MILL IN KENT,
Converted into a comfortable home for Belgian refugees.

It remains to describe the schemes which were organized on non-commercial lines to provide employment for the refugees. The women, one may safely say, were rarely idle. At the worst they knitted garments for the men in the trenches, and in some places—*e.g.*, Blackpool—the ladies of the local committee helped them to use their skill in needlework and embroidery. By far the most interesting piece of work was that which the Committee of Hampshire House carried out on its own initiative and at its own cost. It is a club with workshops and a hostel in two beautiful old houses in Hammersmith (Hampshire Hog Lane), whose object it is to train both men and women in handicrafts. Mrs. Wheeler, Mr. Fred Rowntree and Mr. Walter Seward undertook the charge of thirty-six refugees, and confined their choice to carpenters and bootmakers. They housed the Belgian families in a delightful old house on the Mall, and at once set the men (and a woman skilled in needlework) to work

BELGIAN GIRLS LACE-MAKING
At the Lace-Makers' Hostel, Upper Brook Street, London.

at their benches. Most of them had done nothing but coarse commercial machine-work in the past. They now learned under skilled instructors the best traditions of cabinet-making, wood carving, and leather work. Drawings were obtained of some of the wonderful old chests and carved lamp-stands at Ypres, and these were reproduced with enthusiasm and skill. Modern furniture was also made, sometimes after English and sometimes after Belgian designs, all of it good and solid handiwork, and much of it beautiful in form. The families were maintained free, and a wage was paid equivalent to trade union rates, with a deduction for board.

This Hammersmith scheme was necessarily carried out on a small scale, but these contented craftsmen, working among beautiful things in an atmosphere of practical idealism, were certainly the most fortunate refugees in England. This type of scheme was carried out on a much larger scale, with less of the artistic element, in several larger towns. Leeds was the pioneer, and Bradford probably carried its possibilities to the fullest development. Of the 213 employable women and 141 employable men among the refugees in Bradford only 17 found work in local trades. The Bradford Committee accordingly set on foot a regular system of classes and workshops. The women were taught dressmaking and millinery, and the men carpentry and boot-repairing, while both learned English. From the classes the refugees were drafted into workshops, where they were set to make articles of clothing or furniture which would be of use on their return to Belgium, or to repair their own clothes and boots. Classes and workshops were alike housed in a big building lent by the Corporation, which became a social centre for the whole refugee community. The men made trunks, chests of drawers, tables and stools. Fourteen became cobblers and boot-makers. Forty women and girls made clothing, including underwear for the Belgian Army, and forty more made millinery. Among the men, a lawyer, an architect, and a schoolmaster worked at the benches beside manual labourers. The rate of pay was what a skilled worker would have earned, but an amount up to 50 per cent. was deducted for board, 15 per cent. was paid as pocket money, and the remainder, by the wish of the refugees themselves, was set aside

for their use when they return to Belgium. The refugees who were sent to seaside places had some reason to envy those who had gone to Bradford or Leeds.

The Glasgow Committee, which adopted the motto "Scotland's debt to Belgium," struck a note which ought to govern all our thinking about the refugees. It is pleasant to know that they were grateful for the hospitality they had received. But while we may feel that we have done no more than our duty, it is proper that we should render our thanks to those who have discharged it for us. The officials of the Local Government Board who planned and organized with a zeal and a kindliness which no volunteer worker could have surpassed, the volunteers of the War Refugees Committee who laboured for long months at tasks which came to be a tedious routine, the local committees of such great towns as Glasgow and Bradford who did their work with real statesmanship, the countless individual visitors and hosts—all of these worked not merely for Belgium but for our own honour and good name. Thanks to them the migration which might have been mere tragedy conferred its double benefit on those who gave and those who took.

THE BELGIAN REFUGEES IN HOLLAND.

"Deeply moved by the fate of all the peoples who have been dragged into the war, Holland is willingly bearing the extraordinary burdens laid upon her, and receives with open arms all the unfortunate who seek a refuge within her borders."

These words, spoken by Queen Wilhelmina in her Speech from the Throne on September 15, 1914, give the key to the attitude of Holland towards her unhappy Belgian neighbours. It is impossible to speak too highly of her efforts to alleviate the lot of the houseless and home-

LIFE IN A DUTCH CONCENTRATION CAMP FOR REFUGEES.

BOYS AT SCHOOL AT GOUDA.

less Belgian refugees. Their destitution was extreme. Everything had to be supplied to meet their necessities—food, shelter, bedding, clothing of all kinds, as well as innumerable other articles indispensable to the life of a civilised people. All these were forthcoming with a bounty and spontaneity which afforded the best testimony to the feelings of the Dutch towards violated Belgium. Holland rose to the demands made upon her by the claims of charity and humanity in a way worthy of her high reputation as a Christian and civilized nation, and the part which she played in this great crisis will redound to her everlasting honour.

Only those who were themselves witnesses of the exodus of the population of Antwerp shortly before the fall of that city can form any idea of the calls upon the hospitality of the Dutch. The lessons of Louvain and Dinant had not been lost upon the people of Antwerp, and when it became evident that the Germans would take the city practically the whole population deserted it. This was the high-water mark of the refugee invasion of Holland, but it was by no means the beginning. The first fugitives from Belgium made their appearance in Holland at the outset of the hostilities, thousands crossing into the province of Limburg, where they were provided with shelter. A Netherlands Committee to aid these and other victims of the war was immediately formed under the presidency of Mr. Th. Stuart, of Amsterdam. It depended exclusively on private aid, which flowed in generously. The Press of the Netherlands was very active and successful in promoting this work of charity, and it was seconded by many voluntary helpers, who, by serving on committees and in other ways, rendered invaluable assistance in the relief of distress. The Dutch, naturally a rather undemonstrative people, did their good works in silence, but the result of their efforts is eloquent.

As the war developed towards the west the stream of refugees increased, but it could still be dealt with. It was otherwise when Antwerp was besieged. The Netherlands Government, realizing what might happen, took measures before the fall of Antwerp to distribute the expected multitudes of fugitives throughout the country and to provide them with suitable

IN THE SEWING ROOM AT GOUDA.

accommodation. With the fall of Antwerp, however, the exodus from Belgium swelled beyond the powers of the authorities to cope with it. The refugees were conveyed in special trains to all parts of the country, and then, through the efforts of the Commissioners, of the Queen and the burgomasters, as well as of private citizens, were housed in public and large private buildings and in dwelling-houses. It was not practicable to transport the refugees in sufficient numbers from the south of the country, as the stream continued for days, during which the public means of conveyance were in large part required for the removal to internment camps of the Belgian soldiers who had come over the frontier. This was a step which in the interest of public safety admitted of no delay. The south of the country was therefore quickly flooded with from 800,000 to 1,000,000 refugees. Thanks to favourable weather, their sojourn in the open air or beneath very slender protection was attended with little hardship. The dominating question was how to provide the refugees with food, and that at a time when the wheat supply in the Netherlands was restricted and the import from overseas accompanied by considerable difficulties. Meanwhile the distribution of the fugitives through the country went on.

As soon as possible after the fall of Antwerp the question of how far a return of the refugees was possible was discussed with the authorities concerned in Belgium. The Government speedily arranged a daily service of special trains to give those who wished to go back the opportunity to do so. In so far as the Government was convinced that the refugees could return without hardship, it stated so repeatedly, but the rule observed was that no one should be compelled to return.

The refugees were received everywhere, as the Queen said, "with open arms," and sheltered with the utmost kindness. When it became evident, however, that a large percentage of them consisted of the dregs of the population, and that theft, drunkenness, danger from contagious diseases and the like were increasing, the Government resolved to remove the undesirables either to Oldebroek or Veenhuizen.

New difficulties showed themselves when the sojourn in Holland of some hundreds of thousands of refugees began to be prolonged. Owing to the great drawbacks connected with their returning, recourse had again to be made to public and private buildings. Private dwellings were terribly overcrowded through the taking in of refugees. Outbreaks of infectious disease occurred. Here and there were cases of typhoid, scarlet fever, and diphtheria, not to speak of measles. Danger therefore threatened. Moreover, the working-class population of Holland was passing through a hard time. Complaints began to be heard that the foreigners who were so well received were better off than the people of the country itself, and it is true that here and there a striking

contrast was to be observed. After the best of the fugitives who could return had done so, complaints were heard of difficulties connected with the less desirable. It so happened, also, that a period of very sharp frost occurred unusually early in the autumn, so that the rather primitive housing which up till then had been sufficient proved inadequate. In addition to this, it was necessary, in the interests of the defence of the country, to remove from various places thousands of refugees, now that their stay seemed likely to be of considerable duration.

All these considerations together led the Government to proceed without delay to the establishment of a number of refuge places—Belgian villages in which all could be collected who could no longer remain distributed about the country. Oldebroek was gradually extended, but it was soon necessary to evacuate it, in order that it might accommodate a part of the 10,000 interned soldiers. The refugees were therefore transferred to Nunspeet, where a Belgian village was constituted. Great difficulties, which were gradually overcome, were experienced in setting it up. Another village was established, south of Ede, and a third at Uden.

It was not practicable to accommodate all the refugees in the villages. In the south of the country hundreds stayed in the holds of ships, which provided good quarters and were suitably adapted for their purpose. Here and there, as at Bergen-op-Zoom, barracks for housing were constructed. In Baarle-Nassau again, a portion of the railway station was set apart, the people being thus provided with a good roof in a large building properly protected against wind and weather. A private place, conducted at the public expense, was also provided for refugees at Gouda. In June, 1915, the number of refugees at all the refugee places together was about 18,000; but the total number distributed throughout the whole country was estimated at some 40,000 or 50,000. Some who had much to do with the work of caring for the refugees put the whole number in June at about 100,000. The refugees were very well treated in the camps, but the desire of many of them to live in other surroundings was not unnatural. Hospitality was generously offered by private citizens prepared to receive one or more persons, or even whole families, in their homes. Many refugees of rather better social standing and education than the majority of the inhabitants of the

THE GIRLS AT SCHOOL AT GOUDA.

MR. TH. STUART,
President of the Netherlands Committee.

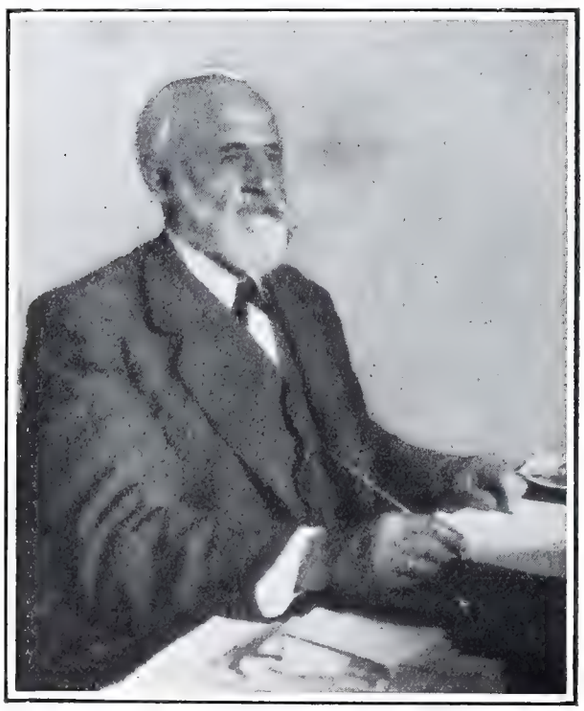
villages were cared for in this way. The ladies' committee of the Dutch Committee, under Mrs. De Booy-Boissevain, looked after the department concerned with "lodging," and accomplished a difficult task brilliantly.

After the first necessities of the people had been met, the accommodation was gradually improved with a view to providing such comforts as were desirable. The problem of housing and feeding was followed by that of clothing. This also was duly faced, the Government giving orders for the necessary expenditure to be charged to its account.

The villages were organized in such a way as to give the dregs of the population simple quarters providing suitable shelter and a place to sleep in, while rather superior accommodation was arranged for the better class of refugees. The Government looked to the latter for assistance in the administration of the villages and for the formation of a common life, where, as elsewhere, the good might exercise a restraining influence on those standing most in need of control.

Church and school accommodation was provided, and wherever there were fugitives with children particular care was bestowed on education, the instruction being given by Belgian teachers. A special commission consisting of Belgians and Dutchmen was formed for education, under the presidency of Mr. P. Otto, member of the Second Chamber. Great attention was paid also to the provision of work, exceptionally valuable aid having been afforded for this purpose by the Rockefeller Foundation and the Society of Friends. While regard was had in the first place to the necessities of the refugees, the future needs of Belgium were also kept in view, simply furnished wooden houses which can be taken to pieces being specially made with this object. A Danish gift of 325,000 gulden was received for this purpose.

Provision for the support of the hundreds of thousands of refugees was made by private persons, and, at the expense of the Government, by the local authorities. The Commissioner of the Queen, Jhr. Chr. J. M. Ruys de Beerenbrouck, assumed responsibility for measures connected with the relief of refugees as soon as they began to arrive in Limburg, which dated from the entrance of the Germans into Visé. When the Germans penetrated farther into Belgium the Netherlands Government itself gradually intervened and, recognizing that the task would be very heavy, organized the available help by appointing on September 21 a central commission. F. W. C. H. Baron van Tuyll van Serooskerken was appointed Chairman of this commission, the members being: Jhr. Chr. J. M. Ruys de Beerenbrouck, Mr. A. C. A. van Vuuren. Mr. J. R. Snoeck Henkemans, Jhr. A. L. J. Melvill van Carnbée, Mr. A. van Eijsden, Mr. M. H. G. Th. Fiedeldy Dop, Mr. A. Robertson, Mr. E. D. Kits van Heijningen, Mr. Th. Stuart, Baroness J. S. B. A. van Ittersum, and Mme. M. van Rijckevorsel, Baroness de Bieberstein.



MR. P. W. A. CORT VAN DER LINDEN,
Dutch Minister of the Interior.

THE QUEEN OF THE NETHERLANDS.

Mr. J. J. A. Knoote and Mr. Bern. J. Veldhuis were appointed secretaries.

Jhr. Chr. J. M. Ruys de Beerenbrouck was further designated a Government commissioner for North Brabant and Zeeland. He in turn appointed Mr. J. R. Snoeck Henkemans as delegate for Zeeland. Private assistance continued to flow in. It is not known how much was contributed by individuals, but everyone, high and low, rich and poor, gave what he could, the funds received from private sources amounting certainly to some millions of gulden. The Government contributed 8 million gulden; and large private gifts were also received from abroad, especially from Denmark.

To the names already mentioned of those who devoted themselves especially to relieving the necessities of the refugees a foremost place must be given to that of Mr. P. W. A. Cort van der Linden, Minister of the Interior, who had the very able assistance of Mr. J. B. Kan, Secretary-General, and Mr. L. Lietaert Peerbolte. Almost every burgomaster in Holland was also active in this respect, especially those of Zeeland and North Brabant, upon whom fell an exceptional amount of work. Hundreds of thousands of private individuals, some of them known by name, while many were and wished to remain unknown, also rendered assistance. The urgency as well as magnitude of the problem facing them will appear from the fact that in Amsterdam alone as many as 30,000 refugees from Antwerp and its neighbourhood, mostly of the poorer class in need of everything, arrived within two days. A Central Committee for the Belgian Refugees in Amsterdam, 1914, was constituted with Dr. Josephus Jitta as president. Notwithstanding the work done by the Government and the municipality of Amsterdam, the Netherlands Committee for the Support of Belgian and other Victims, referred to at the beginning of this account of the work for the Belgians, remained intact. It contributed to the cost of establishing and maintaining temporary hospitals for fugitives, and provided money and clothes for the refugees, especially in the southern part of the country. It was always ready to respond to the applications of the Government commissioners in the camps for refugees for supplies of clothes, school and other necessaries, for these people. For this purpose it was compelled, notwithstanding the economic crisis which daily made itself more seriously felt, to make constant demands for assistance from all classes of people in the Netherlands, in the conviction that it would receive support as long as a single Belgian refugee remained upon the soil of Holland.

JHR. RUYS DE BEERENBROUCK (*marked with a cross*),
Commissioner of the Queen at Limburg.

CHAPTER LXXIX.

WOMEN'S WORK IN THE WAR—II.

Women and the National Register—Women make Munitions—Deputation to Mr. Lloyd George—Work of the Order of St. John—Women's Colleges and the War—The Girls' Schools—Infant Mortality and Its Prevention—The Women's Emergency Corps—Three Arts Club—International Relief Committee—Help for Germans—The Quakers—Jewish Women's Work—Officers' Families Fund—Soldiers' and Sailors' Families Association—The Salvation Army—Post Office Relief Fund—Thrift—The Spirit of Women's Work.

BEFORE the first year of war drew to a close the women's position had become in most spheres of activity definite and clear. Their place in the war scheme could not be denied. When the great war loan was launched some of the earliest subscribers were women: as yet they had not been called upon to make ammunition in any great numbers, so they made silver bullets instead. In the first war loan they were not able to buy many bullets, as the minimum of £100 was too high for many of them with small savings. Having bought their war loan they clamoured to be included in the projected National Register that was to be the great Domesday Book of the future. Though omitted from the first draft, as a result of angry protests from all parts of the country they were included in the Bill as presented to Parliament by Mr. Long on June 29, and their right to serve, hitherto unofficially recognized except on the impotent war register of the Labour Exchanges, was acknowledged in Parliament and by members of the Cabinet on every possible occasion.

As the value of the women's services became more and more recognized, they pressed home upon the newly formed Ministry of Munitions their desire to make ammunition—a privilege which the women of the Allied and enemy countries already possessed. The strength of this claim was such that Mr. Lloyd George agreed to receive a deputation and consider the question from the point of view of the labour available, the number already employed, and the conditions under which further women could be admitted into those factories which would be under Government control.

The Women's Social and Political Union had asked Mr. Lloyd George to receive the deputation, and they organized a great procession of women to accompany it, which included members of many ordinarily opposed societies. In spite of a sullen day, with pouring rain and a driving wind, many thousands of women on July 17 marched through the West End of London. Mr. Lloyd George addressed the women in an encouraging manner from the Ministry of Munitions, and he informed the deputation that steps would be taken for the employment of more women and for their payment on the same piece rates as the men. He also stated that he could only employ the whole-time worker. Meantime, while the Government schemes were under consideration, a week-end scheme for volunteers was started at Messrs. Vickers' factories at Erith by Mrs. Moir, wife of the Chief of the Inventions Branch of the Ministry of Munitions, and Mrs. Cowan, wife of the Member for East Aberdeen. The first batch of volunteers included two women master-turners, Lady

THE RIGHT-TO-SERVE PROCESSION, JULY 17, 1915.

Part of the women's deputation to the Rt. Hon. David Lloyd George, Minister of Munitions: a contingent carrying rose-wands Inset: "Belgium" in the procession.

Colebrooke and Lady Gertrude Crawford, who found no difficulty in the work at the lathes, and also Lady Gatacre and Mrs. England, a sister of Lord Loreburn. Lady Scott, widow of Captain Scott of Antarctic fame, joined the electrical department, where her delicacy of touch was of value. These ladies worked in the same way as the ordinary factory hands, beginning on the rough work of the 4·5 shell and the 18 lb. shrapnel.

The demand for women in agriculture increased as recruiting spread in the agricultural districts. Various schemes were started on which the Board of Agriculture kept a watchful eye. The Board of Trade scheme for training women progressed; the demand for women to milk, to plough, and even to use the scythe, grew; and many applications for women as farm bailiffs were received by the Women's Farm and Garden Union. Lady Cowdray lent her house in Carlton House Terrace in July for an exhibition of what women were doing on the land, and many women landowners urged the farmers on their property to give the women who had taken courses of training the opportunity of replacing men. The women were urged by experts to "purge themselves of every shred of the amateur."

Meantime, while new war activities were being planned, women were carrying on their practical efforts to alleviate the sufferings of the wounded and to increase the wellbeing of the sound of limb. Without any great blowing of trumpets, when war broke out the Order of the Hospital of St. John of Jerusalem, which dates back to the eleventh century, and part of whose buildings at St. John's Gate go back

to that knightly time, put its machinery into motion. To this Order is due the great scheme of ambulance training which led to the formation of the St. John Ambulance Association in 1877 (incorporated with the Order as one of its principal foundations in the Charter of Incorporation, 1888), the example of which was copied by Germany in its *Samariter Verein*, and copied also in every State in Europe. Throughout the length and breadth of India, and in all parts of the British dominions, brigade units of the Association were formed; in the South African and Chinese Wars over 2,000 members of the Brigade went on active service as hospital orderlies, and in the first year of the Great War 8,000 men had gone as trained orderlies. The Ambulance Department, through the Ladies' Committee of the European War Fund, of which the Queen was President, and Adeline, Duchess of Bedford, Chairman, sent out very many trained nurses to the front.

One of the biggest pieces of work done by the special committee of the ladies of the Order was the organization of hospital supplies for the sick and wounded. For this work there was a special Warehouse Committee, with Lady Sloggett as Chairman, and Frances, Lady De L'Isle and Dudley as Vice-Chairman. The accommodation at St. John's Gate would not contain the vast stores which were sent in from all parts of the world where the Order was represented, to say nothing of the working parties which had been organized throughout England, so a great warehouse in St. John's Square was taken, and there from ten in the morning till often late in the night the ladies of the committee worked, sorting and arranging

WOMEN'S FARM IN LONDON.
Exhibition of Farming at Lady Cowdray's residence, Carlton House Terrace. Lady Cowdray (centre) watching the butter-making process.

vast quantities of socks, shirts, blankets, hospital requisites, and even games, puzzles and books that came for the use of the sick and wounded. Newfoundland alone sent 16,000 pairs of socks; Rhode Island, amongst other generous gifts, sent a large roll of 50 yards of mackintosh; Boston sent 150 hot-water bottles; and another State sent a quantity of iodine. The requisitions flowed in, and the vast piles of warehoused goods, carefully ticketed, came down from their shelves to the requisition table and were sent out. Ceaseless generosity, and the need for it, kept the workers busy acknowledging, sorting, packing. Before the committee met each week the ladies went into the old crypt

THE RIGHT-TO-SERVE PROCESSION, JULY 17, 1915.
Mr. Lloyd George addressing the women from the Ministry of Munitions.

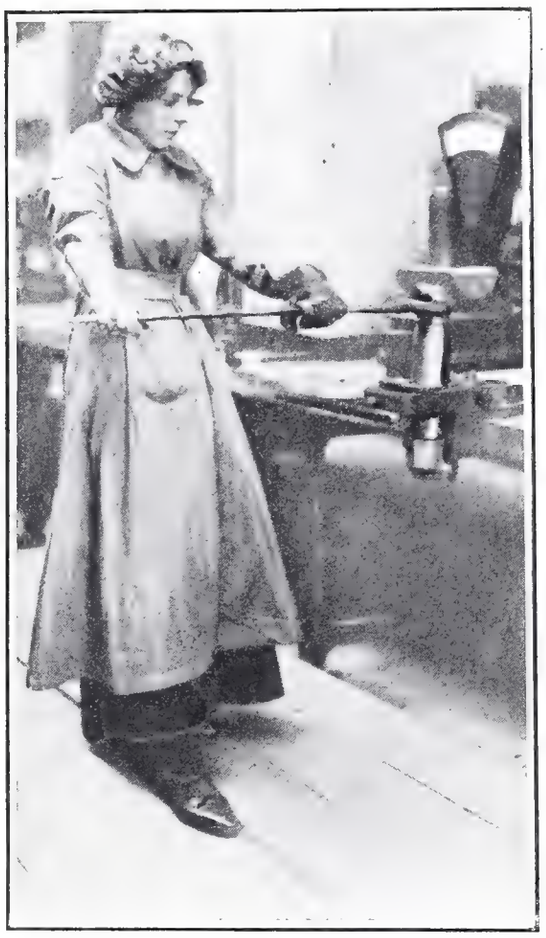
WOMEN SHELL MAKERS AT WORK.

Assembling parts of the shrapnel shell and soldering fuse sockets.

with its traditions of mercy and healing and prayed for the success of their work and the ultimate victory of the Allies.

There were many women anxious to help who could not work readily in their own homes; they were not used to cutting out shirts, making bandages and other things that were needed in the hospitals, and they spoiled much good material for the want of useful direction. It was the knowledge of this willingness that caused Miss Ethel McCaul, R.R.C., whose work in connexion with the Union Jack Club is still remembered, to found the War Hospital Supply Depôts, where voluntary workers could come and work under direction and find what they could do best. So wonderfully did the idea grow that presently there were nearly thirty branches, and Queen Mary came down to see the St. Marylebone Depôt at 2, Cavendish Square, and made it the Surgical Branch of her Needlework Guild.

Every morning before 10 o'clock a long line of voluntary workers might be seen waiting to offer their services, titled women waiting side by side with women of the working classes. The work-rooms would only hold a certain number, and as 1,000 had registered at this centre alone, many had to be sent away every morning. Before commencing work each woman put a square of muslin over her hair, donned a big apron and white sleeves, and then went to work in one of the various rooms—the bandage room, where hundreds of bandages were got ready, the surgical dressings room, the splint room, the moss and pine dressing room, the needlework room, the slipper room, where hundreds of surgical slippers were made for men with wounded or frost-bitten feet, the linen room, where old linen was sorted, cut out, and re-made to the best advantage, or the stock room, where all goods were sorted and arranged ready for dispatch. The workers found out the thing they could do best and then concentrated on it. One woman discovered she had a genius for making surgical slippers, so she became captain of the slipper room, and the same principle was carried out in all the rooms. The voluntary workers each week subscribed to the running expenses of their depôt, and the whole of the sums coming in from the public were solely devoted to the purchase of material.



WOMEN SHELL MAKERS AT WORK.
Screwing on a fuse socket and filling shrapnel shells with bullets.

The war hospital supply depôts were at Ipswich, Hove and Kensington, and in connexion with St. Marylebone (the Central Depôt, Surgical Branch of Queen Mary's Needlework Guild), depôts were formed at Battersea, Blackheath, Hampstead, Market Harborough, Plymouth, Streatham, Wimbledon.

Work guilds were formed in connexion with the Central Depôt at Alton (Hants), Ayrshire, Banbury, Bicester, Bradford, Bristol, Chippenham (Wilts), Chislehurst, East Grinstead, Epsom, Farnham, Farnham (Surrey), Frome, Gerrard's Cross, Hampstead, Heckmondwike, Hindhead, Holborn, Ightham, Iver Heath, Lamberhurst, Leatherhead, Letchworth, Lewes, Lymington, Mayfair, Malmesbury, Oxshott, Oxted, Oxton, Parbold, Ripley (Surrey), St. Margaret's (Herts), Stevenage, Sutton, Torquay, Uxbridge, Watlington, Westminster, Wokingham, Woldingham, Worthing.

The war outwardly made little change in the women's colleges—the total number in residence was as high as usual, with the exception that fewer foreign students had come in; but seen from within the war had a very sobering and saddening influence. Miss Jex-Blake, Principal of Lady Margaret Hall, Oxford, in an address given at the Association of University Women Teachers, summed the situation up when she said: "Our students, for the most part, belong to the class (popularly supposed to be the 'idle rich') whose menfolk have joined the Army, one way or another, almost to a man. The roll of honour, the lists of prisoners, of missing and wounded, contain the names of very many of the friends and relations of our students. Hockey matches, theatre-going and tea-parties have vanished from college life. Hard work, mitigated by Red Cross lectures and knitting, is taking their place and helping us to bear the strain of uncertainty and anxiety."

Early in August Oxford was told to prepare for 1,000 wounded; in October the Town Hall and the Masonic Hall were fitted up as hospitals and the whole of the cooking arrangements were put into the hands of two most capable volunteers, Mrs. Grundy and Mrs. Jenkinson, the wives of two Oxford dons. In the housing of refugees the wives of Oxford professors did their share. Ruskin College was used as a clearing-house for working

AT WORK IN A MUNITION FACTORY.
Making metal cartridge cases.

men and their families; professors from Louvain and the other Belgian universities, with their families, were welcomed and made happy in an academic family atmosphere. In Worcester College a workroom was opened by the kindness of the Provost, where Belgian women could come and make clothes for themselves and their children.

But the welcoming of the refugees, the catering for hospitals, and even the large subscriptions (£1,700 was collected on Belgian Day and £1,500 was subscribed for two motor ambulances for the Front in the early days of the war), did not exhaust the feminine activities. Labour and trade in Oxford, centred as it was round the undergraduates, was very adversely affected by the war, and lodging-house keepers, laundresses, servants, etc., were thrown out of work. Six specially appointed relief committees met. A branch of Queen Mary's Needlework Guild was started, employing a number of paid women, a weaving school for women, and a toy-making industry for girls were instituted, and also a war club for women connected with the men of either Service. Women's working parties were started all over Oxford, including one for reducing the impossible garments made by other people into something like human proportions.

The women students also helped, through their delegacy, in meeting the year's deficit of the University, with what a kindly Don described as, "considering their ways and means, a most handsome contribution." Strangely enough, there came to them out of the clamour of war a small step towards the goal women students in the shadow of the elder universities had been striving for. The startling announcement was made in April that Somerville, the largest of the women's colleges, standing conveniently between Woodstock Road and Walton Street and next door to Radcliffe Infirmary, was commandeered as a military hospital. More startling still was the announcement that the college would move into Oriel, where the part of the buildings which once were St. Mary's Hall, the "Skimmery" of the ancients, was walled off for them. "Somerville-Oriel" made history for the women's colleges.

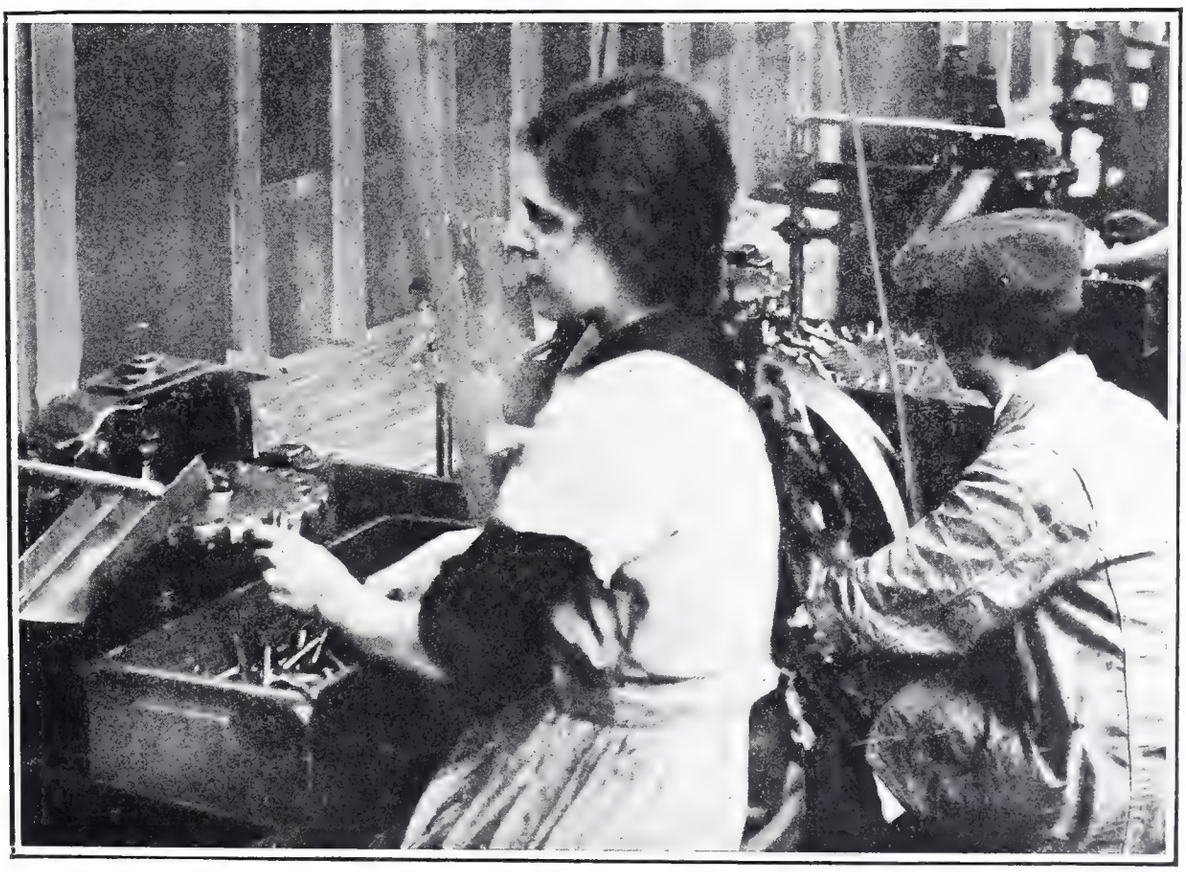
At Cambridge the women students and their dons were equally active. Immediately on the outbreak of war Newnham College, through its Principal, offered to turn one of its vast dining

halls into a ward for wounded soldiers and to give up additional rooms for nurses and doctors. This offer would probably have been accepted if the first Eastern Base Hospital had not been built in Cambridge. At the same time the Sidgwick Dining Hall was fitted as a temporary hospital ward and placed at the disposal of the local Red Cross Society, which immediately organized a series of demonstrations in nursing, which were largely attended by the women residents in Cambridge. As at Oxford, when term commenced again the women students threw themselves wholeheartedly into lectures and demonstrations in First Aid and Nursing. Together with members of the college staff who belonged to a Voluntary Aid Detachment, the students helped at the base hospital and also assisted in organizing a large convalescent home, to which Belgian soldiers were drafted to relieve pressure on the hospital.

The problem of Belgium and her refugees was also faced in the early days of the war at Cambridge. About twenty professors and their families and about 130 students from the University of Louvain were received by the University, and the staff at Newnham College made themselves responsible for much of the necessary organization. The Borough Committee at Cambridge also opened its doors to a large number of Belgian refugees, and the students, glad to be of use, helped in every way and made one particular family their care, providing them with house and board for the term of the war. Belgian women students were also received into the college.

At Girton the college gave free residence and teaching to three Belgian women students and lent an acre of garden for demonstration of Belgian intensive culture under a Belgian lecturer, paying the rent also of the Belgian family who worked on this land. In the winter they knitted very diligently for the Army, and subscribed and gave concerts for Belgian and other funds. The staff took part with the students in all these things and worked also at Red Cross and hospital work in Cambridge. In the long vacation the students scattered in all directions, but the traditions of work were maintained in such different ways as the making of shells and darning for hospitals.

Besides the work that was done individually by these famous women's colleges, Girton and Newnham combined together to raise the funds necessary to equip a hospital unit to be sent out by the Committee of the Scottish Women's



AT WORK IN A MUNITION FACTORY.

Stamping pieces of metal for cartridge cases.

Foreign Service Hospital. More than £1,800 was collected, and this sufficed to pay for an equipment of 200 beds. This unit, which was named the Girton and Newnham Colleges Unit, was sent out to Troyes in June.

The other women's colleges throughout the country helped in various ways.

Typical of London's myriad activities was Bedford College for Women, Regent's Park. The magnificent class rooms were opened in August for Red Cross classes in conjunction with the London County Council, and hundreds of women were enabled to take their certificates and start hospital training without loss of time. When classes re-opened for the autumn term a War Activities Committee was started, managed jointly by staff and students: a Hospitals Supply Depôt was started, and a Tipperary Room, and members of the staff arranged to take charge of a certain number of the blinded soldiers from St. Dunstan's Lodge on the Regent's Park lake every evening for two hours when the men were taught to row. Places were offered in the college to refugee students: money was collected for the Scottish Women's Hospital Units, for the University of London Motor Coffee Stall, and for a bed in King George's Hospital.

PRINCESS ARTHUR OF CONNAUGHT.

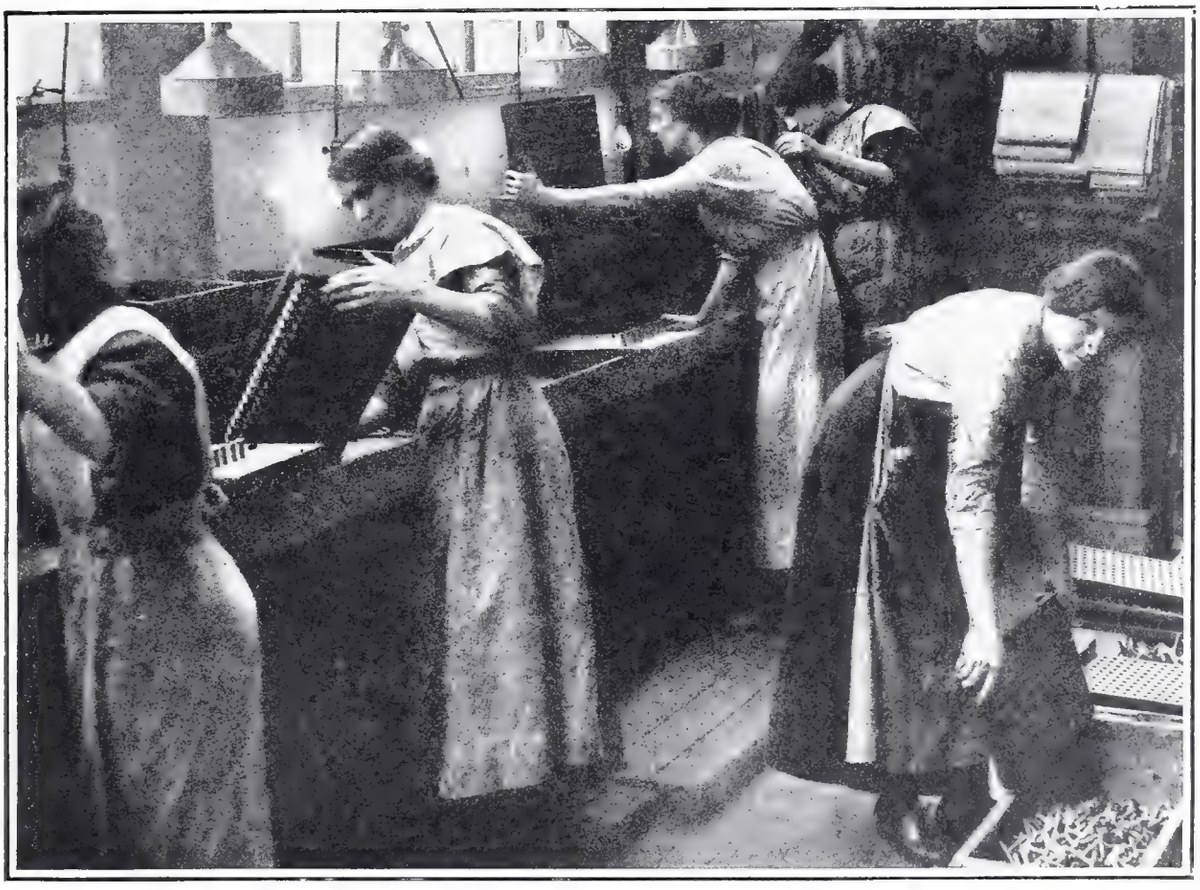
[*Connell.*

MRS. DACRE FOX.

Perhaps the most important work done by the college was in the long vacation, 1915. The Chemistry Department was given definite Government work under the Royal Society's War Committee and the National Health Insurance Committee, and set to work on processes concerning the manufacture of synthetic drugs. Artificial methods were being adopted as the supply of drugs and raw material was cut off, and various laboratories had been systematised to provide what was required. The work was carried on voluntarily by the staff and students and the college lent its laboratories.

Like their elder sisters at college, the schoolgirls of almost every school in the country determined to do something for those in the battle-line. The Girls' Patriotic Union of Secondary Schools was founded at the instance of Miss Gray, St. Paul's Girls' School, Hammersmith, and the Association of Head Mistresses took up the idea with enthusiasm. The Queen permitted Princess Mary to be its patroness, and the leadership of the King's daughter, who had been working simply and unostentatiously from the outbreak of war helping in the making of comforts for men at the Front, brought inspiration for every kind of effort.

Cartridge making.



Inspecting the completed cartridge.

WOMEN AND GIRLS AT WORK IN A MUNITION FACTORY.

GIRLS AT MANCHESTER HIGH SCHOOL PADDING SPLINTS.

Miss Robertson, the head of the oldest girls' school in the kingdom—Christ's Hospital, Hertfordshire—became president of the Union.

The 329 schools that formed the Union were bound together by a common desire to serve, and in order that their service might be as efficient as possible they undertook to share with each other their various experiences and to bring into the common stock any special information that they might have gained, whether of needs or of methods of supplying them. There were two forms of help given—active service and self-denial. Many schools indulged in both, but most concerned themselves either with the care of the sick and wounded and the troops in training or at the Front, or with the relief of distress, whether among our own people or among the Belgian refugees.

Self-denial reigned in all schools. The girls gave up their pocket-money and their prizes, their sweetmeats and their holidays. One of the first schemes for national service was seen in schools that gave up their half-holidays to freeing "grown-ups" for other kinds of war service and in learning domestic duties, that they might perform and set other women free by so doing. At Cheltenham the older girls did the mowing and rolling of lawns to prepare for their games, and they learned efficiency in the service of the house and school, preparing for the shortage of labour that they might presently find in their homes. In some girls' schools there were carpentry classes: at these bed-tables for the wounded were made. Motor-cars were borrowed to take invalid soldiers for drives.

In all the girls' schools during the war the head mistresses had a daily talk with the girls on the progress of the war. The Government White Papers were eagerly read by the senior girls, and the juniors had things explained to them very simply. Maps were hung in prominent positions in the schools and the fortunes of the Allies followed very carefully. In the assembly halls were the lists of honour of relatives of the girls and of their teachers serving with the forces—a lengthy and a gallant list. But in no school was there any element of hate-culture permitted: the girls instinctively ranged themselves on the side of service, and race-pride was shown at its finest in this way.

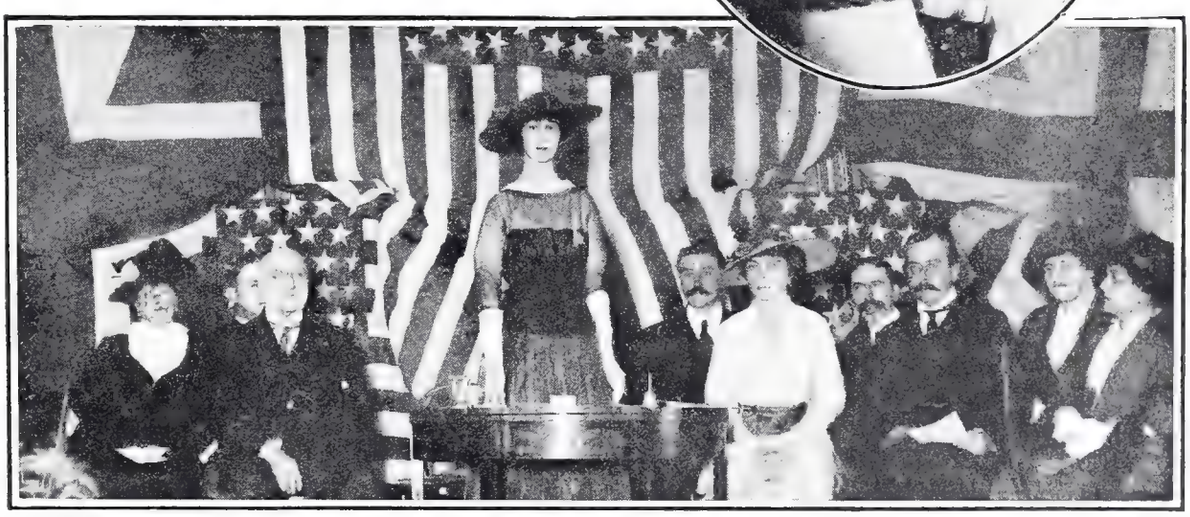
Knowing that nothing could be the same afterwards, head mistresses all through the anxious months watched the talents of their pupils, and, feeling that the younger generation would have to bear the aftermath of war, saw to it that education was conducted on the most practical and useful lines. There were fresh developments in many branches, and elder girls were given help in choosing careers on the lines of which they might develop their powers during their school life. In many families the financial position was entirely altered by the

war, and it was obvious that gently-born girls who might have hoped to drift from pleasant *débutantes* with liberal pocket-money to a rich social life would, in the altered condition of things, have to look to other careers than the ultimate goal of marriage. In the Art departments of many schools, where portraits and fancy pictures were usually painted, training was given in making good architectural plans and drawings for surveyors. The making of architects' models was also tried. The help that was given to the farmers and market gardeners by organizing parties of girls from many schools developed a desire for an outdoor life which the mistresses were only too glad to encourage, directing their tastes to horticulture and agriculture in its many forms.

The enormous daily wastage of life in the heavy casualty lists opened the eyes of women throughout the country to many grave problems —to the falling birth-rate and to the high rate of infant mortality. At a mass meeting of women held in November, 1914, at the Guildhall—the first meeting of the kind ever held in this historical place—Dr. Mary Scharlieb called attention to the sad recurrence of "only son of ——" in the casualty lists, and spoke to a vast audience of women, many of them quite young, of the great responsibility that rested on those who wilfully restricted the birth-rate.

The question of the prevention of infant mortality had already, before the war, begun to occupy a very strong hold on women's attention throughout the country; during the progress of the war it was discussed in various ways at important meetings attended by well-known and little-known women and spoken to by important authorities.

The fact that about 100,000 children die under one year of age, nearly 100,000 between one and fifteen years of age, and nearly 120,000 in the pre-natal period every year was brought home to women throughout the country at many meetings held under many different auspices. They were reminded that "the Race marches forward on the feet of little children." Councillor Margaret Ashton at Manchester suggested that there should be a municipal milk rate as there is a municipal water rate, that towns should supply milk to babies as



AMERICAN WOMEN'S WAR RELIEF FUND.

The Duchess of Marlborough presiding at a meeting at Grosvenor Square, London. Reading from left to right are Mrs. Hoover, Senator Chauncey Depew, the Duchess of Marlborough, Mrs. Lewis Harcourt, Mr. W. Burns, Lady Henry, Lady Randolph Churchill. Inset: The Duchess of Marlborough.

PACKING A REQUISITION IN THE WAREHOUSE AT ST. JOHN'S GATE

they supply water to manufacturers, and that the care of babies should be the first charge on the communities and not the last. Subjects the lack of discussion of which through false modesty has been the cause of much loss of infant life were dealt with at women's meetings. The Duchess of Marlborough lent Sunderland House for a woman's meeting on Motherhood under the auspices of the Council of Public Morals, at which Princess Arthur of Connaught and many well-known women were present to hear the establishment of maternity centres throughout the country urged. It was also suggested that a special Government department should be constituted to supervise the care of the whole nation's motherhood, and that this department should form an integral part of a Ministry of Public Health. Some of these motions were of the nature of pious resolutions—though expressing expert opinion—since the money to bring them into effect was not likely to be allotted until some of the expenses of the war had been wiped out. Still, they proved how strongly the subject had taken ground at a time when the war news was very serious.

But though very little had been done before the war and far too much was left to voluntary effort, a very genuine attempt to supplement and encourage voluntary effort occurred simultaneously with the outbreak of war: this was the action of the Local Government Board in dealing with the question of relief to expectant and nursing mothers by means of a grant of half the approved expenditure on maternity centres. The Board of Education also made a grant, and it was interesting to note that the Board stated in its memorandum that it was the establishment of medical inspection of school children in public elementary schools which drew attention to the existence of ailments and defects due to the mothers' ignorance of simple rules of health. Instruction at the schools for mothers should include, according to the memorandum, systematic classes, home visiting and infant consultations, and the provision of specific medical and surgical advice and treatment (if any) should be only incidental, whereas at baby clinics and infant dispensaries medical treatment was given and the instruction was only incidental.

A great increase in the number of maternity centres immediately took place, and a stimulus was given to their formation by the work of eight organizers appointed by the Association of Infant Consultations and Schools

for Mothers, through its special propaganda committee, which dispensed a fund which was started by the Hon. F. Dyke Acland, for the purpose of helping local centres and philanthropic people to start infant consultations and maternity centres. The consequence was that during the first eight months of the war over 100 new schools for mothers, many of which included dining rooms for nursing and expectant mothers, were actually started, while some 200 more were in a state of preparation. Hundreds of new recruits were added to the already large army of voluntary infant-welfare workers, most of whom first made the most of opportunities for training afforded to them by the National Association for the Prevention of Infant Mortality.

The Central Committee of the Women's Co-operative Guild was very active about this time in questions relating to women and children in war-time, and especially active in endeavouring to get the adoption of the Notification of Birth Acts compulsory, and also the appointment of health visitors. The Public Committee of Manchester adopted a scheme, which included ten maternity centres (six being voluntary schools which were taken over), beds in the maternity hospital, and ten additional health visitors. This was partly due to the propaganda work of the Guild in that city.

The Women's League of Service, in operation for many years, also did a considerable amount of good in providing dinners for poor expectant mothers sent to them by hospital almoners, health visitors, and others. The Women's Imperial Health Society carried on a very active propaganda in securing cleanliness in the feeding of infants, and by means of a cinema film in showing the dangers of the house fly when allowed to breed and settle on food or drown itself in milk.

They also organized in July a very complete exhibition of mothercraft which had a special educative value for those interested in child welfare. The Friends of the Poor devoted special attention to the babies also, and during the early part of the war provided penny dinners for mothers and children in seven different districts in London.

One of the biggest organizing forces of women's work during the war was an agency that sprang up within two days of the declaration of war. The idea of it arose in the fertile brain of a well-known actress—Miss Decima

LOOKING AFTER THE SOLDIERS' BABIES.
Feeding time at a day nursery.

Moore—who gathered around her a little body of women—Miss Lena Ashwell, Dr. Christine Murrell, Hon. Mrs. Haverfield, and Mrs. Kingsley Tarpey—who called themselves the Women's Emergency Corps, and borrowed the Little Theatre from Miss Gertrude Kingston for their first home. There in the early days of the war they did a great deal for the calmness of London at a time when women, who could not offer their services for the Front, were especially in a fever of unrest. They found work for the rich woman who wanted to help somebody somehow, and found paid work for many women whom employers had dis-

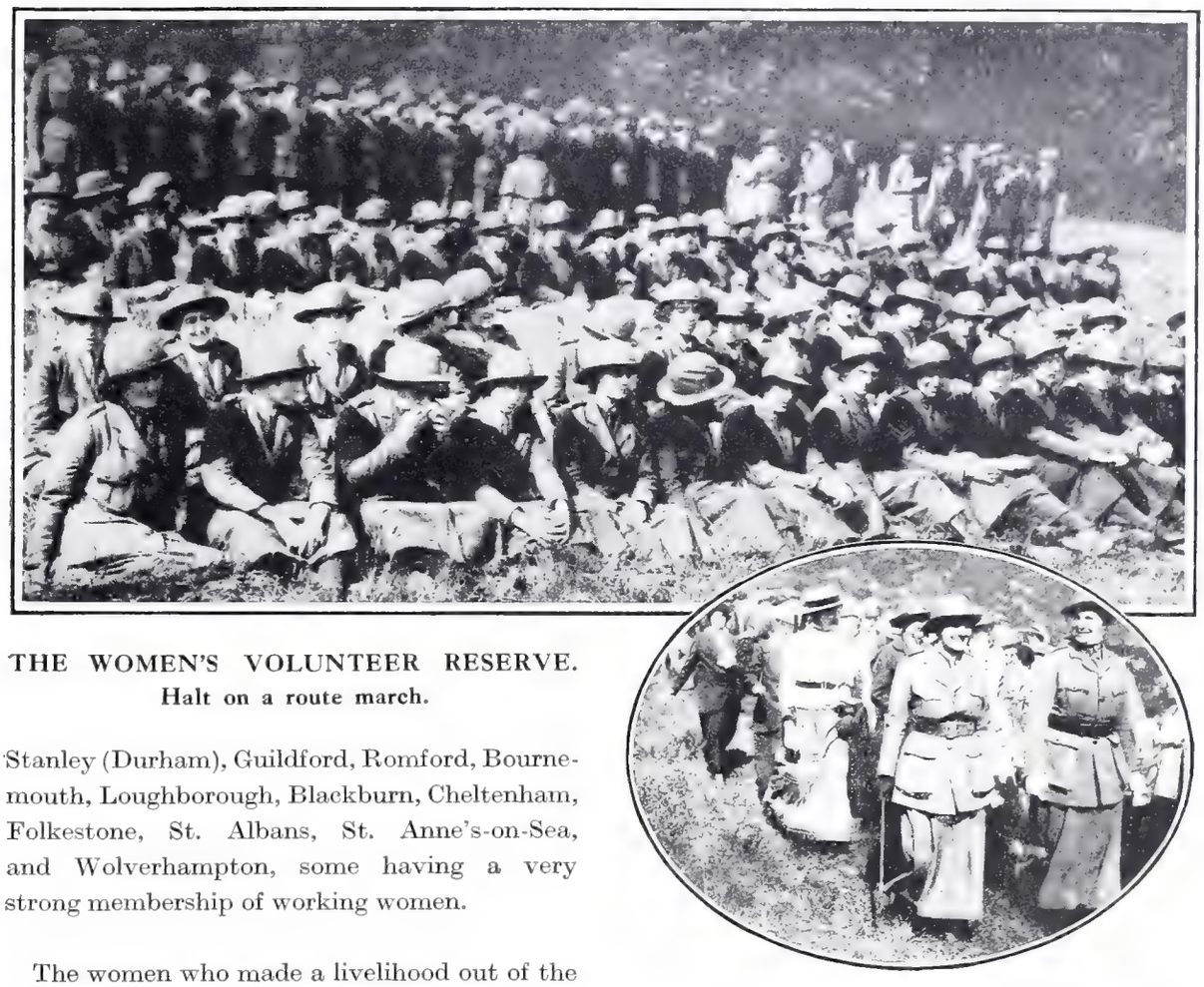
GIRL MESSENGERS
At the War Office.

missed in a panic. Nobody knew in those first days what would happen or what national dangers and difficulties there would be to face. It was determined to organize women's help on the widest possible basis: to collect their good-will and to spend it to the best advantage. They were the first to feed the Belgians. The idea of collecting London's surplus food (which afterwards developed into the National Food Fund) was due to one of the corps' enthusiasts, who conceived the idea of collecting the surplus meat and vegetables at Smithfield and Covent Garden and other places and distributing it where it was needed. Soon their energies outgrew the capacity of the Little Theatre, and the Council of Bedford College for Women lent them their old buildings in York Place, Baker Street. There they set to work with a strong list of supporters and the Duchess of Marlborough as their Hon. Treasurer.

In the first days of the war they enrolled about 600 interpreters, among them being women who spoke French, Flemish, Dutch, Russian, and Greek. This was the first organized body to assist the early refugees from Belgium. They met the Continental trains at all the stations and ships at the various docks in and about London, at all hours of the day and night, provided with carefully compiled lists of hotels, boarding-houses, lodgings of all kinds, all investigated and all arranged with the amount of accommodation available, the scale of reduced prices, and, for those who were destitute, offers of free hospitality. In those early days, before the Alexandra Palace was opened, and before the Government had been able to take the work in hand, many hundreds of refugees of all classes would have fared very badly without the help rendered by this band of the Women's Emergency Corps.

Homes were found for English refugees from Belgium; orderly help was given in hundreds of different ways, and presently all over the country branches began to appear, the earliest being in Bassenthwaite, Bedford, Bournemouth, Cardiff, Christchurch and Southbourne, Eastbourne, Edinburgh, Liverpool, Manchester, Newport, Romford, Southampton, Southport, Tunbridge Wells, Walthamstow.

It was an extraordinary undertaking for the collection of capacity and enthusiasm; it even turned its attention to teaching languages to men going to the Front. Before it was a month old the Women's Volunteer Reserve, of which Lady Londonderry was Colonel-in-Chief and Mrs. Charlesworth Colonel, was started to drill women on the same lines as men and to discipline them in such a manner that they might be ready for any emergency. Soon the khaki-clad companies were to be seen route-marching on Saturday in neat short khaki coats and skirts, felt hats, and puttees. There were no social distinctions, and nearly 1,000 women formed the London battalion. Country branches were formed at Tunbridge Wells, Birmingham, Brighton, Derby, Newcastle, Leicester, Blackpool, Gateshead, Worcester,



THE WOMEN'S VOLUNTEER RESERVE.
Halt on a route march.

Stanley (Durham), Guildford, Romford, Bournemouth, Loughborough, Blackburn, Cheltenham, Folkestone, St. Albans, St. Anne's-on-Sea, and Wolverhampton, some having a very strong membership of working women.

The women who made a livelihood out of the Muses had, with few exceptions, a very bad time during the war ; at all times most generous in giving to others who were in need, they found themselves in many cases at the lowest financial ebb, and forced to seek assistance themselves. Dramatic tours were cancelled very summarily when war was declared, and women and girls, many of them depending on these engagements in the near future, and with no provision for the future, found themselves stranded. One of the enterprises principally organized by women to meet this emergency was the Three Arts Club Employment Bureau. An audition committee of well-known people met once a week to hear artists seeking work and to secure the best talent. Managèrs who could apply through the committee for artists who had already made their name were also able to communicate with others whose value was decided after auditions.

Artists were sent out to entertainments for the wounded soldiers, Belgian Refugees, Soldiers' and Sailors' Families Associations, and hospitals at home and abroad. Seven concert parties were arranged for France, which, under the auspices of the Y.M.C.A., visited the base

THE WOMEN'S VOLUNTEER RESERVE.
Signal drill at Wimbledon.

camps. These parties stayed in France two or three weeks, and gave three concerts a day. The difference that this amount of employment made to many of these people was astonishing. Miss Lena Ashwell, who was the moving spirit of the whole thing, gave a wonderful entertainment in support of these camp concerts, to which the Queen and Queen Alexandra came in token of sympathy.

The women members of the Civilian Force earned the admiration and emulation of the public, owing to the extraordinary promptness with which they devoted themselves to giving assistance to Belgian refugees, for whose influx the country was not prepared. Large premises in Kingsway were secured immediately the need arose, and there Lady Emmott and her friends of the War Refugees Committee and women voluntary workers from the Civilian Force set to work to distribute 500,000 garments which had been poured in on them by generous persons.

But the beginning of the war, and the unprecedented calls made on them, did not exhaust the activities of the women Civilians. They threw themselves wholeheartedly into the enormous amount of clerical work in connexion with the transport of refugees and their luggage to various parts of the country. They begged homes for them north, south, east, and west; they acted as interpreters for them at the railway stations and places of reception on their

IN THE NORTH OF FRANCE.
The First Aid Yeomanry Corps at work.

THE THREE ARTS CLUB EMPLOYMENT BUREAU.

One of the workrooms.

Inset: Miss Elizabeth Asquith with some of the members of the War Emergency Fund.

arrival; they gave first-aid to those who were injured in the flight from Belgium in the terrible early days, and they washed and dressed in fresh clothing many of the little children who came in dirt and rags, and with the dust of Flanders on them. They lent their motor cars for transport; they nursed wounded soldiers at the Australian Field and other hospitals; they escorted over 1,000 British wounded at various times home from the Front; they supplied surgical appliances, bandages, towels, sheets, antiseptics, and other comforts, including tobacco and cigarettes to men at the Front.

They made arrangements for a hospital equipped with 400 beds for Belgian wounded soldiers, and at the same time a convalescent home for the children of British wounded soldiers and sailors, educating them for various occupations, was started. They knitted socks, mittens, body belts, and garments for men at the Front, and recruited in season and out of season men for the ranks of both Services. Their work was gratuitous; in some cases they worked all night, and most of them paid their own expenses, besides contributing to the relief of sufferers out of their own pockets. And over their work they threw a veil of anonymity which was not the least part of their merit.

The International Women's Relief Committee formed at the headquarters of the International Women's Suffrage Alliance (which, like all the other suffrage organizations, turned its attention on the outbreak of war to other work) was specially adapted for its chosen work of assisting women of all nationalities stranded in this country without means and without employment. It linked up with other societies to reduce overlapping to a minimum; its help was accepted by the American Embassy, which had charge of German and Austro-Hungarian subjects in the United Kingdom, and by the Home Office, which referred inquiries from women to it.

It was as a result of a suggestion from one of its members that the repatriated German women were prevented from taking large sums in gold back to the Fatherland, a habit which they acquired in the early days of the war. To this Committee was also due the suggestion of the thorough personal search at Victoria Station of all women leaving for the Continent—a search which, while undoubtedly inspired by the best motives, proved a considerable irritation to many harmless British subjects. It also lessened the number of curiosity tourists to the scene of war. The work of the

[*Connell.*

MISS LENA ASHWELL.

Committee was divided into four sections, general relief work, assistance to Belgian refugees in Holland, repatriation of German and British girls and women, and a bureau for the tracing of missing persons.

One of the most important tasks undertaken by the Committee was the arranging of escorted parties back to Germany. These parties left London weekly, or sometimes fortnightly, as far back as September, 1914, escorted to the Dutch-German frontier by ladies connected with the Committee. When the feeling against Germans in London became very strong after the *Lusitania* outrage, the Government was very glad of the assistance of these ladies in the repatriation that was urgently demanded.

Belgian or British girls or children were brought from Belgium to London. The constantly changing arrangements for passports, permits, and steamer and train accommodation made the arrangement of these parties difficult but important. Girls from all parts of England, Scotland, and Ireland applied for information and help, and would have been hard put to it without the Committee's help. The Foreign Office, Home Office, American Embassy, and Scotland Yard made full use of the Committee and gave it every facility, and there is reason to believe that the work done was appreciated by the German authorities, while numerous letters of thanks were received from the grateful relations of the travellers.

The work they did for the Belgians in one of their hours of greatest need was practical and prompt. After the bombardment of Antwerp, when 80,000 refugees poured into Flushing, the normal population of which is only 20,000, the overcrowding was terrible and the need of food urgent. Miss Ellen Walshe, who was in Holland escorting a party of German girls from London to Goch, was a witness of this harrowing influx of people where there was hardly anything for them. An appeal from her reached the office in London on October 13 mid-day, and that very evening four great railway trucks of food were shipped to Flushing, including 20,000 lb. of bread and large quantities of chocolate, condensed milk, and biscuits. The direction of operations was taken by Miss Chrystal Macmillan, to whom the success of the whole transaction was due. In the course of the afternoon, with the support of the Foreign Office, she obtained the consent of the Local Government Board and Customs authorities to the export of food (otherwise forbidden), the remission of ship dues by the Port of London Authority, special wagons on the train, and special handling by the steamship company. Large sums of money were afterwards raised by these ladies and sent direct to buy food in Holland.

Women gave splendid help in the work of the Belgian Repatriation Fund, which energetic Madame Vandervelde inaugurated, of which Lady Selborne was president and Mrs. Francis

[Langfier.

LADY SELBORNE.

Acland hon. secretary. The various women's political associations helped in the collection of funds. Mrs. Wedgwood initiated a scheme for giving Belgian women refugees material for making-up household and other linen for their own use. Other Belgian women, too, spent much time in making clothing for those women in Belgium who had been living for many months under German rule, and whose opportunities of replacing their wardrobes were small. These women were, of course, paid for their work at the same wages as British workers.

On parallel, but different lines, the Quaker women did unobtrusive work at this time. People who quietly and efficiently mind their own business are usually ready for an emergency. And that was how it happened that the Quakers became a sort of buffer between the aliens and the public, whose attitude gradually hardened as atrocity after atrocity came to light. While at no time was there anything like the fanatical hatred shown to the Germans in England which the Germans in Germany showed to the English stranded in that country, the feeling towards the Germans in England was undoubtedly gradually intensified until a suspicion of German origin was a barrier to employment. So the Friends formed in October, 1914, an Emergency Committee for the assistance of Germans, Austrians, and Hungarians in distress. A similar committee of Germans with offices in Berlin was formed to assist foreigners in Germany. On this side help was given by supplementing by food doles the small allowance made to the wives of interned men, who, owing to the impossibility of getting work, though many of them were English born, were in much distress. It was a difficult task, and one which had to be carried on under the suspicious eye of Scotland Yard. The value of the kindness shown by many Quaker women at this time cannot be estimated until normal conditions return.

The women of every religious persuasion helped during that difficult time; there was plenty for everyone to do, and there was no shirking. When hostilities broke out in August the Executive Committee of the Union of Jewish Women formulated relief measures for the women of their own religious persuasion, and this work continued until May, 1915, when the improvement in women's employment

[Thomson.

LADY EMMOTT.

FREE BUFFET AT VICTORIA STATION
For Soldiers going to and from the Front.

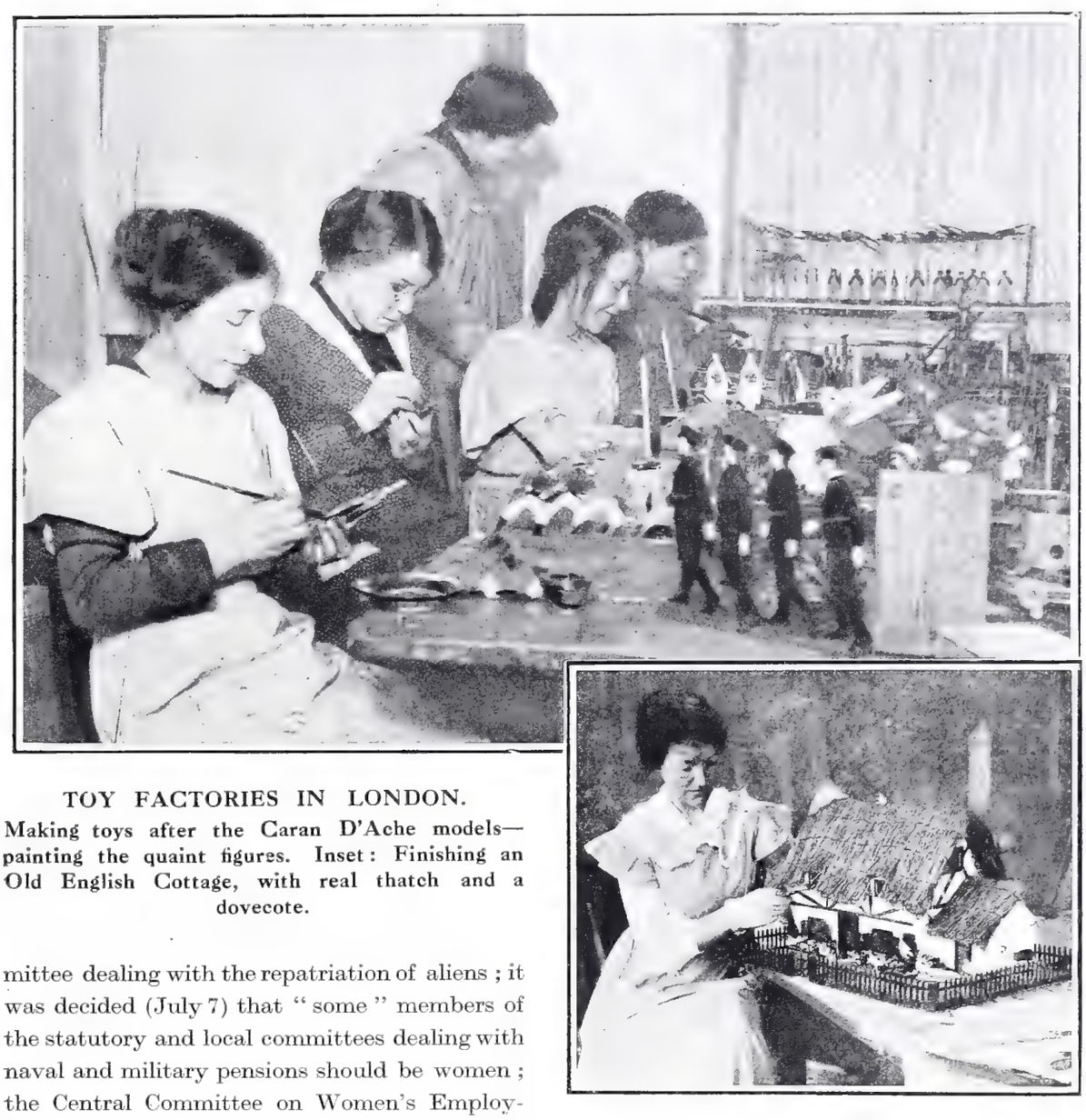
was universal. Their work in the assisting of Jewish refugees from Belgium, particularly those that poured into London in the great rush from Antwerp in the beginning of October, was described by a Jewish woman as "a mixture of mothering and monitoring." An informal meeting was held at the Rev. Morris Joseph's house on October 13, 1914, when representatives from the Aldwych Refugee Committee met representatives from the Union of Jewish Women and formulated a plan for the relief of the better class Jewish refugees. The funds given by the West London Synagogue for the refugees were allocated to the Union, many offers of furnished and unfurnished houses were received, a temporary hostel was opened by the Union where refugees could stay from one to six days while waiting for more permanent homes. Jewish volunteers helped at the offices, large gifts of money were received, an office was established at the Beth Hamedrash, where educated refugees could be privately interviewed. When Passover came the Union of Jewish Women made special arrangements for their Belgian *protégées*, and motzas, etc., were provided free in addition to their allowances. Clothes, perambulators, maternity homes, training, and employment were found, according to their necessities, for many Belgian Jewish refugees, and about 600 in all were looked after.

The workers of the Primrose League and of the Women's Liberal Federation helped in many ways, having laid aside all active politics. Lady Milman was appointed chairman of the Needlework Committee of the Primrose League: working parties were held at the Central Office and at the local habitations, and vast numbers of garments sent out to the Queen's Needlework Guild, the Order of St. John and the British Red Cross Society. The Women's Liberal Federation were active on behalf of the soldier's wife, protesting against the use of the Paymasters' Index for Police supervision and taking action in other useful ways. Workers from both were welcomed in all the big war schemes for the thoroughness with which they carried out anything they took in hand. The knowledge and experience of women was taken advantage of everywhere.

There were women members on the Government Committee and the National Relief Fund Committee; two women were put on the com-

[Ernest Brooks.

PRINCESS VICTORIA OF SCHLESWIG-HOLSTEIN.



TOY FACTORIES IN LONDON.

Making toys after the Caran D'Ache models—painting the quaint figures. Inset: Finishing an Old English Cottage, with real thatch and a dovecote.

mittee dealing with the repatriation of aliens; it was decided (July 7) that "some" members of the statutory and local committees dealing with naval and military pensions should be women; the Central Committee on Women's Employment was, as has been said in a former chapter, entirely composed of women; Miss Lucy Gardner was Hon. Sec. of the Intelligence Committee, and in the formation of Local Representative Committees the appointment of women, including representatives of women's labour organizations, was part of the instructions of the Local Government Board. The Association of Women Clerks and Secretaries Emergency Fund, of which Lady St. Cyres was President, did splendid work at a minimum expenditure of money, refusing assistance to no applicant and finding work for a great number. On the Professional Classes War Relief Fund women were largely represented, and did much of the hard work, treating the family as a unit, organizing a maternity scheme, and dealing with difficult questions of housing and temporary relief. The Women's Local Government Society took advantage of the Local Government Board circulars of August 8, recommending that women's organizations should be represented on local committees dealing with unemployment and distress, and did excellent work on committees throughout the country.

Many Royal ladies, with the Queen as their great exemplar, found for themselves some special piece of work to do at this time. Princess Mary made her charming appeal for Christmas boxes for every man in the Army and Navy, and with the Queen went down to Deptford to see to the packing of them. Queen Alexandra, who was President of the British Red Cross Society, took the wounded specially under her Royal wing, and many convalescent soldiers proudly hobbled on sticks presented by her. Princess Victoria on the day after war was declared turned the drawing-rooms of Marlborough House into a workroom for garments for the wounded; the Princess Royal was interested in her own section of the

QUEEN'S "WORK FOR WOMEN" FUND.
Yards of socks made for the soldiers at the Front.

British Red Cross, the County of London, of which she was president. Princess Christian organized a hospital train which was the most perfect conveyance for the wounded that has ever been seen in any war; Princess Victoria of Schleswig-Holstein worked indefatigably as chairman of the Ladies' Auxiliary Committee of the Y.M.C.A. schemes for recreation huts. Princess Arthur of Connaught entered St. Mary's Hospital as a Red Cross probationer: Princess Alexander of Teck specially interested herself in the commissariat of the Windsor munition workers. The daughters of the Grand Duke Michael of Russia had a special knitting scheme of their own for knitting comforts for mine-sweepers.

Individual schemes, like Lady Bushman's name ambulances, for which ladies with popular Christian names asked for contributions from others with similar names, were worked with ingenuity and pertinacity. When sandbags were needed they were supplied in great numbers by individual voluntary effort, supplementing the War Office contracts; canvas bags for the belongings of the wounded at base casualty stations were asked for and obtained in large quantities and pugarees for recruits in training in the hot weather were also forthcoming. Half a million respirators were made in a day in response to a War Office appeal. Individual ladies asked for comforts for Canadian, Australian, New Zealand, and Indian troops, and readily obtained them. Others appealed for comforts for special home regiments, both Regulars and Territorials, for men on the battle-ships, and in the mine trawlers. American women in London, with Lady Paget as their President and the Duchess of Marlborough as their Chairman, started a War Relief Fund in the early days of the war, and amongst their schemes of relief were war workrooms, which did much to aid poor women when things looked blackest.

Women's clubs, too, helped through their individual members, the Ladies' Automobile Club in particular, whose members were all of them used to running their own cars, gave much help here and in France. Their cars were utilised to take the wounded for drives, and in many cases were given up entirely for motor ambulances. They also started canteens, and Lady Angela Forbes' buffet at Boulogne won much praise for its splendid efficiency.

Canteens were started at the railway stations for soldiers going to and from the Front; Lady Limerick took charge at London Bridge Station. A hostel for nurses, giving them free "hotel" accommodation and called after Queen Mary, was started in Tavistock Place. Lord Desborough lent Taplow Court as a country house for this scheme, and there were many offers of hospitality for nurses going to and from the Front. Lady Byron opened a charming house, "The Nest," looking over Hampstead Heath, also for the tired nurse.

To Mrs. Gaskell is due the excellent idea of a War Library for hospitals at home and abroad as far back as August 18. Lady Battersea lent Surrey House to give facilities for receiving and packing the books as they poured in after a Press appeal, and Lord Haldane secured the recognition of the War Office. It was run with voluntary help for eight months, and Mr. Hagburg Wright, of the London Library, gave it his counsel. All the hospitals, water ambulances and convalescent homes in France, to the number of 77, and the Medi-

terranean units were supplied with suitable books. At the request of the Admiralty all ships on active service in Home waters were supplied with books according to the complement of each ship. Mountains of soiled books and magazines were distributed to the camp recreation centres.

The new officers that the war created and their extraordinary gallantry, resulting as it did in the most terrible loss of life in the commissioned ranks known in any war, raised an enormous problem for the Officers' Families Fund. On August 14 and again on the 27th Lady Lansdowne, President of the Fund, of which the Queen is patroness, issued an appeal in the Press for subscriptions; the public, whose sons, brothers, cousins, and sweethearts were giving their lives so freely that the junior commissioned ranks were known with grim joviality as "The Suicides' Club" gave quickly and generously. On the Committee women were in a majority, and their tact in dealing with the gently born and sensitive women who had to appeal to the fund was known to few beyond the ranks of those benefited.

The financial embarrassments, hardships, and privations which the wives of many officers suffered was explained in a leaflet issued by the Fund:

When an officer of the Regular Army is ordered on active service he is put to immediate expense. He must settle his accounts, buy certain things indispensable for active service, make arrangements and provision for his wife and family, and in many cases change his house, often breaking his lease and being put to expense in this way also. Moreover, the rise in the rate of life insurance for officers in war presses hardly on those who have been provident enough to effect such insurance in peace. Once the officer has gone on service the wife has to manage as best she can, meeting all expenses (where there are no private means) from the money her husband can give her, and when it is remembered that roughly speaking the pay of an officer between 20 and 30 years of age is £130 per annum, between 30 and 40 £200 to £300, between 40 and 50 £400, it will be realized that hardships and anxieties are often entailed on the wives and families of officers on service.

Officers of the Special Reserve, of the Territorial Force, and Naval Officers were also very hardly hit.

In all cases where financial help was given the name of the recipient was kept strictly confidential and was known only to members of the Executive Committee. But besides money grants there was offered much hospitality, some for officers' wives only, some for officers with their wives, some including a child or children, with or without a nurse, and yet others for boys and girls alone for long or short periods. The women who opened their houses

QUEEN'S "WORK FOR WOMEN" FUND.
Winding wool for 2,000,000 pairs of socks for soldiers.

to other women in this way did so freely and generously, giving besides their hospitality a rich store of sympathy and kindness, and offers of education for both boys and girls were numerous.

The Queen, who is the Patroness of the Fund, followed most carefully its growth and interested herself in many schemes connected with it. Some of the best articles sent in by Queen Mary's Needlework Guild were, at Her Majesty's request, reserved for the clothing branch. A special department for this purpose was established at 29, Berkeley Square, and a secondary depôt for men's clothing was set up at

[*Barnett.*

MRS. ARTHUR SASSOON.

2, Albert Gate, by the kindness of Mrs. Arthur Sassoon.

In the first five months of the war over £23,000 was given away in grants, and the year 1915 was entered upon with £51,900 in hand, thanks to the steady generosity of the public. The sum, however, was none too great; many of the men who joined the Army as officers in ever-increasing numbers had given up civil employment to do so, and that employment had been their only source of income. The consequence was that the longer the war lasted, the proportion of wives and families needing pecuniary help (and mothers were helped where necessary) increased, and the more did cases already relieved need renewed assistance.

But in spite of the claims on the fund, those who knew their changed circumstances often wondered at the gallant women who adapted themselves and their *ménages* from an expenditure of in some cases thousands to a meagre hundred or two. Patriotism is not an essentially male virtue, and the patriotism of the wardrobe and the pantry, of the daily silent battle against the desire for accustomed luxuries was fought during that harsh time by gently-born women with rare courage and resolution.

It would be easy to underestimate the vast work done by what is known affectionately all over the country as the "S.S.F.A.," the Soldiers' and Sailors' Families Association, during the early part of the war. It was no new society; the women were well acquainted with it by name, and came everywhere to the local offices which in many cases were started to meet the obvious need for them arising out of the vast scale on which recruiting was done. Their biggest work was the advancing of money until the separation allowances came in, and afterwards they had the difficult task of getting the money back from the Army paymasters. They only dealt with N.C.O.'s and men, but so much has this war changed the status of the soldier that in many cases their help was given to families whose wage-earner had been making five pounds a week or over and had thrown up his job to take a "Tommy's" pay. The greatest tact was needed in the thousands of visits that had to be paid, and the other great organizations willingly lent their best workers for this purpose.

The nature of the work done throughout the country can be very fairly judged from what was covered by the County of London branch in the first six months of war; afterwards the great strain on the society lessened. There were in London about seventy offices with a voluntary staff of 4,000. There was an average of twenty cases for each worker, and in view of the many unfounded charges of immorality amongst the soldiers it is interesting to note that out of about 80,000 cases there were only 1,352 unmarried dependents, and of these a number were induced to marry by the influence of the ladies of the Soldiers' and Sailors' Families Association. How few were the cases of fraud may be judged from the record of the St. Pancras branch at Camden Town, over which Lady Helen Cassel has presided since the

Haines.

LADY FRENCH.

outbreak of war and which deals with an extraordinarily poor neighbourhood—in a year's working they had only one instance of dishonesty out of thousands of cases. Mourning was given to many widowed women, and the clothing department, which received many thousands of garments from Queen Mary's Needlework Guild, has been of enormous service to many poor families.

In spite of the charges too lightly made against the wives of soldiers that they wasted their separation allowances in drink and neglected their children, the society of all others best qualified to bear witness against them if they deserved it, the National Society for the Prevention of Cruelty to Children, testified very strongly to the improved conditions of living of the women, the reduction in the cases of child neglect and the decrease in cases of drunkenness amongst women. The allowances given to the soldiers' wives were only abused in a very few cases, and once they began to be made weekly the standard of living was raised and the women's homes became better and their children better clothed. Before the giving of the allowance weekly the lump sum gave a strong temptation to "celebrate," which impecunious neighbours encouraged.

The Children's Aid Committee, with Ellen, Lady Desart as President, the Duchess of Somerset Vice-President, and Miss Margaret Douglas Hon. Secretary, was a women's effort which was able to do a good deal to help the fighting forces during the war. It was formed on the outbreak of war as a Sub-Committee of the Insurance Tax Resisters' Association, whose members decided to lay aside their political activities and devote themselves to practical benevolence. The idea was that where there was distress or difficulty in a poor home one of the best ways of relieving it was by those in better circumstances inviting one or more of the children of their less fortunate neighbours to stay as guests in their house for long or short periods. About six hundred children were helped, and it was found that Reservists and men anxious to enlist who were widowers with children presently found their way to the Association. When this was known, at the request of the Soldiers' and Sailors' Families Association, a poster was printed and placed in recruiting stations calling attention to the fact that widowers could place their children in the care of the Committee. Many men were able to rejoin their regiments who had been held back by anxiety about leaving their children.

The wife of the new civilian soldier knew a good deal of loneliness when the first drafts of

[Lizzie Caswall Smith.

LADY PROCTER.

Kitchener's Army went into camps at a distance from the place where they had once lived. Many of these women, who had had their lives built up on the home-coming each evening of their man and the pleasant gossip of the day when his day's work was over, were now faced with a loneliness to which they were unaccustomed.

There was obviously a need of some kindly, welcoming place for many of these women, some place where they might meet and talk of their men, where they might be able to have simple food with friendly people around them, and feel no temptation to go to the public-houses in search of that companionship which is necessary to a sane outlook in a time of great stress. The idea occurred to a woman working amongst the soldiers and sailors to start war-clubs for the wives and female relatives of men in both services. Hardly was it mooted in the Press when hundreds of women offered their services as voluntary workers and war-clubs sprang up everywhere. The originator of the idea was Mrs. Juson-Kerr, and she called her clubs the Tipperarys, and linked them up in the Tipperary League. Then Lord Kitchener's sister, Mrs. Parker, started clubs called the White Rose League, and so did many others. Some were called "Women's War-Clubs," or "Women's Patriotic Clubs," one of the most interesting of them all being the Battersea War-Club, a pleasant, homely place started by a professional woman who gave her spare time and her own and her friends' money to making it a strong rival to the local public-houses. In this, as in other clubs, the wives of service men met, exhibited their babies, showed each other "his" letters, and were encouraged by the starting of a little bank to put by for the day of "his" home-coming, when, wounded perhaps, he would be glad of the comforts savings would procure.

It was thought wise in view of the many clubs that were springing up to form a League which would unite those which cared to join, and which would give advice, if needed, to those who might anticipate forming a club in their district. This was called "The Women's United Services League"; it had the sanction of the Admiralty and the War Office. The joint presidents were Lady Jellicoe and Lady French, and about fifty clubs united together under its ægis, securing thereby a certain conformity in outlook.

[Thomson.

MRS. LLOYD GEORGE.

[Pragnell.

"BRIGADIER" MARY MURRAY.

The seven or eight thousand women who helped at the fifty-two Y.M.C.A. centres at the base camps in France or at the 600 in the British Isles had very little time to tell of the work they did during the most strenuous months of the war. Princess Victoria of Schleswig-Holstein was President of the Ladies' Auxiliary Committee, and this committee—the members of which have been described as "whole-time workers": Lady Rodney, Lady Bessborough, Lady Falmouth, Lady Egerton, Lady Elizabeth Dawson, Miss Du Cane, Lady French, Lady de Ramsey, Cornelia Lady Wimborne, Lady Henderson, Mrs. Lutley Sclater, Mrs. Bertram Corbett, and Mrs. Henry Wibley—was one of the most hard-working of any women's committees formed during the war. Groups of ladies were sent out to France for each centre, who helped day after day in the canteens, in organizing entertainments, in looking after convalescent soldiers, and in mending and darning for them. And their work was equally varied at the big camps at home; wherever there were troops there a Y.M.C.A. recreation centre sprang up; sometimes it was a marquee, sometimes a specially erected hut, and sometimes a converted cow-house.

When the great munitions works were speeded up and Mr. Lloyd George marshalled his forces, a Munition Workers' Auxiliary Committee was formed, of which Princess Victoria of Schleswig-Holstein was also President. This committee consisted of the Duchess of Hamilton, Lady Londonderry, Lady Henry Grosvenor, Lady Fitzwilliam, Lady Ridley, Lady Rodney, Lady Askwith, Lady Ian Hamilton, Lady Procter, Lady Cobham, Lady Wolverton, Hon. Mrs. Cyril Ward, Mrs. Lloyd George, Mrs. Winston Churchill, Mrs. Bertram Corbett, Mrs. Williams of Misken, Mrs. Piercy, and Mrs. Mackay Edgar (Hon. Sec.). These ladies started about twenty centres in the munitions area with liberal canteens, and organized entertainments for the workers. This committee was started about the beginning of June.

The Salvationist women as a group formed a most useful link between the war zone and the home during the war. There are no women of leisure in the Salvation Army. The Salvationist woman may become an officer and devote herself entirely to the cause, or she may remain a private and consecrate the remnants

Swaine.

MRS. HOBHOUSE.

of her time from her secular employment or her home; she has neither pursuits nor recreations apart from her religious calling. This being so, when war broke out, bringing in its train unprecedented situations and needs, the Salvation Army had no sisters in reserve to call up, or new recruits to train for service. Rather, there had to be a general sharing out of more work and extra responsibility to those already fully engaged.

When Lord Kitchener's Army was being recruited, one of the first services which engaged "General" and Mrs. Booth's attention was the providing of rest houses and recreation rooms for the troops. In the case of rest houses, General Booth decided that, wherever possible, the officer-in-charge should be a married man. The wife of every Salvationist officer is herself an officer, having been trained and seen considerable service before her marriage. The presence of good, cheery, capable women amongst the military camps had an excellent influence.

When the British Expeditionary Force was dispatched to the Continent, General Booth formed a small party of Salvation Army officers, under the direction of Brigadier Mary Murray, and sent them forward to minister to the troops in any way they might find possible.

[Russell.

DUCHESS OF SOMERSET.

Miss Murray was the daughter of the late General Sir John Murray. For many years she had been Secretary of the Salvation Army Naval and Military work; she went through the South African War in charge of a Salvation Army Red Cross Brigade, and for her services was awarded the South African medal. Brigadier Murray's early work amongst the troops in France was attended with many difficulties. For weeks she and her companions travelled continually in the troop trains, conversing with the men under every possible circumstance, providing them with refreshments, writing letters for them, and, wherever permissible, holding meetings among them.

During the German occupation of Brussels Miss Murray and her comrades were prisoners for some days. Under American protection they reached Ostend, and from that time they made their Headquarters at the French base, and the work that had hitherto been of necessity haphazard now became regular and organized service. The wounded were pouring in from the Front, and their sufferings in the crowded, jolting troop trains so impressed Miss Murray that she crossed the Channel, and, as a result of her representations to "General" Booth, the Salvation Army equipped and manned two motor ambulance units, consisting of ten Argyll cars, with attendant lorries. These did excellent service in conveying the wounded from the field to the base hospitals. The drivers and attendants neither smoking, drinking, nor using bad language, were known as "The White Brigade," and were used for difficult and responsible work.

Rest houses for the troops, similar to those in England, before described, where, with her husband, a woman officer ministered to the troops, were established at Le Havre, Boulogne, Paris, Lyons, Abbeville, Rouen. A dozen women officers were set apart for the visitation of the large hospitals, convalescent homes, and prisoners' camps at the French base.

The care of graves was another service which fell to these kindly women. Pitiful little notes reached them. "I can't come over, but would you please buy an 'everlasting' wreath and put on my boy's grave?" Not only would this be done, but a brother Salvationist often spared time to take a photograph of the grave to send to the bereaved mother.

There had been from its first days something warm and sympathetic—the human touch that differentiates philanthropy from sympathy—about the work of the Women's Relief Department of the Church Army. Many poor women had grown to love the women of the Church Army and to find their way easily to 57, Bryanston Square. When war broke out and their work in many cases ceased the women came there for sympathy and help. At this time the distress amongst women of the working classes and soldiers' and sailors' wives who had not yet received their allowance was very great, and workrooms were opened where thousands of shirts and socks were made which were afterwards sent to the Front. Many orders were received and the women were paid 2s. a day and given three meals. Better-class women were found an opening for their skill in the art workroom. Later on recreation rooms were started for the wives and dependents of service men. The Fresh Air and Medical Mission Fund, too, helped hundreds of the wives, mothers, widows, and orphans of soldiers and sailors. Lonely and sick women and children found a kind and gentle welcome in the Fresh Air and Convalescent Home, and to newly made widows especially the sympathy in their saddest hour brought hope and comfort.

The General Post Office is, perhaps, the most human of all Government Departments and the

one with the greatest number of women employees. The part they played in the relief of distress was a remarkable one, their generosity in personal service and in money gifts had no rival in any other body of public employees.

At the beginning of the war it was decided that a fund should be started within the Department which would relieve all organizations, such as the National Relief Fund and the Royal Patriotic Fund Corporation, of all charges in respect of the dependents of Post Office servants called to the Colours. It was called the Post Office Relief Fund. The President was Mrs. C. E. Hobhouse, wife of the late Postmaster-General; the Hon. Sec. was Mr. Arthur G. Ferard, Assistant Sec. to the G.P.O. The control of the Fund was vested in a body representative of all classes of Post Office servants, including, of course, the large number of women who are employed by the Department. Local committees in practically every town were formed, and the assistance of the women of the G.P.O. was especially valuable in investigating and reporting upon claims for assistance. The income of the Fund was reckoned to be approximately £90,000 a year, which, when it is remembered that there were at the end of the first ten months of the war 36,000 Post Office servants with the Colours, must appear a colossal sum. It was raised chiefly by means of voluntary deductions from salaries and pensions, the contributions from the women members of the staff having been on a remarkably generous scale.

Women were the chief beneficiaries: after ten months of war there were over 500 widows and 750 orphans on the books of the Fund; in these cases arrangements were made to supplement the Government pension, to provide secondary education for the children or in other ways to help them to make a good start in life. In cases of death grants were made equivalent to those which would have been given by the Royal Patriotic Fund Corporation, and regular or temporary assistance was given when necessary in cases of illness or distress of any kind among the dependents of Post Office servants with the Forces. Besides this it was arranged that a maternity grant of 30s. would be made to wives who were not eligible for benefit under the National Health Insurance Act. Over 400 such grants were made in the early days of the war.

In their free time the members of the female staff of the Money Order Department at Holloway, under their efficient superintendent, Miss Ruth Lock, arranged for the packing and the posting of parcels of food for the Post Office prisoners of war in Germany. From the female staff in the various offices of the Department a very large number of garments were sent to Mrs. Hobhouse for distribution through Queen Mary's Needlework Guild to soldiers at the Front. The needs of the wounded in the hospitals were also remembered and, in addition to the other claimants on their generosity, a number of widows with large families who were on the books of the Post Office Fund received substantial gifts of clothing.

When quite ordinary men donned khaki, they became in the eyes of a number of foolish young women objects to be pestered with attention that very few of them desired. This khaki fever amongst the foolish died down after a time; but it might not have been so easily dealt with had not the National Union of Women Workers quietly and unobtrusively

Speaight

ADELINE, DUCHESS OF BEDFORD.

organized a far-reaching system all over the country of women-patrols, many of them young women not past the age of amusement, who exercised a genial and a salutary influence over those who lost their heads. They wore a neat badge and carried a patrol card signed by the Chief Commissioner of Police in London or the Chief Constables in the Provinces. The police welcomed them, for they were able to deal with girls who would have been frightened at police interference. Sir Edward Henry gave them his sanction, came to their meeting at the Mansion House, and permitted them to patrol the public parks, the Green Park, St. James's Park, Hyde Park, and Richmond Park.

The official recognition of the War Office was also secured. Mrs. Creighton, President of the War Union of Women Workers, approached Lord Kitchener, and he willingly gave instructions that all Brigadier-Generals in command of camps where women patrols were working should be informed that he wished the military authorities to take steps to help them. This information was circulated in every district where there were patrols. A knowledge of military law was part of their training, and in most cases the girls who had to be spoken to were pleased at the interest taken in them. The principal business of the patrol was the discouragement of provocative loitering around military centres. Nearly 2,000 patrols did this work in Great Britain during the war, and an organizer was sent to South Africa in response to an invitation.

Police women were appointed in various provincial towns and several did good work in London. They were started by the Women's Freedom League and afterwards another organization was formed by Miss Damer-Dawson. These police women were dressed in a navy tunic-dress and cloak, and a bowler hat with flat brim. They carried electric searchlights and whistles, but no truncheons. The corps had lessons in drill, signalling, first aid, self-defence, court procedure, and rules of evidence, and how to collect information concerning the locality in which they might be appointed. Though not officially appointed by Scotland Yard these ladies were approved of by Sir Edward Henry. In Hull they did particularly good work.

Early in the war the Young Women's Christian Association, also like the National Union of Women Workers, realized that something should be done where young girls were suddenly brought into contact with large bodies of men billeted in their town, village, or camps in the vicinity. It was decided to provide temporary club-rooms and special social and educative recreation for the girls, and give them a feeling of responsibility. Representatives of the National Union of Women Workers, Women Patrols, League of Honour, Adult School Union, and the Workers' Educational Association joined the Advisory Council, a Central Committee was formed with Lady Procter as Chairman, and as a result girls' patriotic clubs were formed all over the country, at Aberdeen, Aberystwyth, Aylesbury, Chatham, Chelmsford, Chester, Darlington, Edinburgh, Felixstowe, Hawick, Ipswich, Irvine, Montrose, Musselburgh, Northampton, Norwich, Norwood, Reading, St. Pancras, Southsea, Watford, Willesden, Woolwich, Yarmouth, and York. In Newhaven, which became an important transport station, the Central Committee guaranteed the cost of erecting a war-time club and recreation hut.

In some clubs concerts and entertainments were provided once a week to which members could bring their men friends; in other towns the club was the only place where a girl could meet her soldier friend in a quiet, natural way, free from misunderstanding. The clubs did not attempt to provide a stronger attraction than "the man in khaki." Under these auspices the flightiness of the early days vanished and the young women grew used to the war and began to realize its big problems. The women patrols often suggested to girls who were loitering that the clubs were waiting for them.

The League of Honour, formed to raise the standard of honour and good example amongst girls and women during the war, had a big influence on the unstable.

From the beginning of the war thrift was practised by women of all ranks in life. Early in August the Queen caused it to be known that plain living would prevail in Buckingham Palace. Hospitality had become, to a certain extent, Americanised before the war and a competition in expenditure appeared to be the rule in many circles which ate in public. This almost instantly ceased and any excessive expenditure attracted unpleasant attention. The money saved was devoted to war charities, to which women were constant and lavish subscribers. There had been a certain amount

of panic buying in August: it was, however, on the part of the few, and men who lived in chambers were just as guilty as the unpatriotic housekeepers. These frightened people, most of whom at normal times detested lentils, dried fruits and tinned goods, laid in vast stores, the demand for which immediately raised the prices, to the dismay of those who were only buying normal quantities. When the panic was past the shopkeepers refused to take back the unused surplus, and the selfish and their families had a monotonous diet for many months.

Though there had been no real reason for panic buying, prices began to rise, and a year after the war saw an average rise of 35 per cent. on the ordinary budgeting of a middle-class family. The working-class housewife was not, once employment was readjusted on a high wage for war work, as unfavourably situated as the woman of the middle classes with a fixed income, the purchasing power of which was gradually diminishing. The spending of both classes was as a whole provident, though the one reacted against the other: the middle-class woman had shifted her outlook and bought the cheaper cuts of meat, while the working woman in many cases had raised hers, with the result that the cheaper parts of meat rose unduly in price. The standard of living, of cleanliness, and of care of the children undoubtedly improved in the case of soldiers' wives and the wives of highly-skilled artizans. In the middle classes the lessons of thrift were taken more to heart than in any other rank in life, and the warning of lean times to come did not fall on deaf ears. The Board of Trade issued in May a recommendation to everybody to be sparing in the use of meat, as it was needed for the troops. The best-fed army would win, it was said. Soon after this announcement rumours of great waste at the camps began to spread and details of red-tape catering which, besides giving far too large an allowance of meat per head per man, took no cognizance of men who were absent from mess, created a certain resentment amongst those who, following the injunction of the Board of Trade, had become extremely sparing in their meat diet.

Presently an act of poetic justice took place when about three thousand soldiers from various commands were drafted in July to various centres in batches of fifteen to take lessons in thrift and the avoidance of camp waste from trained members of the sex to whom

[*Thomson.*

MRS. GASKELL.

the Board of Trade memorandum was addressed. Already there had been on the part of many trained cookery teachers an attempt to help the camp-cook and save waste of rations. The first county effort in this direction was made by the teachers of the Sussex Education Committee in November, 1914. There were 25,000 men in training in the camp on the Downs above Shoreham-on-Sea, and the men eagerly volunteered for the classes, where only the plainest of cooking was taught, nearly everything being prepared in the dicksey or iron cooking pot common to all military camps.

The National Training School of Cookery, Buckingham Palace Road, had also seized the opportunity of service when their classes opened in the autumn, and offered the Admiralty and the War Office free training for six sailors and six soldiers a month for the duration of the war, and the first pupils from Aldershot and Shorncliffe quickly learned the principles of plain cooking.

Cookery classes everywhere received an extraordinary impetus, and women of varying social rank were to be seen working side by side, sometimes in West End kitchens lent for the purpose, into which the mistress penetrated for the first time as a pupil, and acquired a new respect for her cook. Evening classes of various kinds were held everywhere for the members of Red Cross detachments, some of the pupils training with a view to going out to France to help with the catering in hospitals; one class, at the National Training School in Buckingham Palace Road, consisted of working girls and another of Lady de Trafford and her friends. Lady Rosemary Leveson-Gower was amongst the latter

and went afterwards to help at a hospital at Dunkirk. Many of the schools' trained teachers and Cordon Bleu students became heads of catering and kitchen departments of hospitals, army nursing homes and convalescent homes, while numbers of others were teaching cookery to the men in the camps.

The Board of Education issued a penny book of cheap recipes in July with a foreword from the new Minister of Education, Mr. Arthur Henderson. Food was a common topic of conversation, and probably was more relished because it was felt that the Spartan meal was good patriotism. The lecturing tours of "the Pudding Lady," Miss Florence Petty, under the ægis of the National Food Reform Association, were valued for their practical exposition of thrift; working women liked her because she came to them with recipes and methods easy to carry out with only the simple utensils they had in their own homes, and also because their men-folk approved of the full-flavoured and nourishing dishes she expounded. An effort was also made to popularise Belgian bourgeoise cookery with the aid of some Belgian teachers who were amongst the refugees. The use of the hay-box was also taught almost everywhere as a saver of fuel, of time, and of labour.

The problem of domestic service was met in the same spirit of common sense, and the new spirit of usefulness which had found its way into many pleasure-loving homes inspired daughters to do housework which in former times would have been looked upon as boring and derogatory. The war did a great deal for women in causing them to find their own level, as well as in opening out new avenues of employment to them. The fact that very many young women of the upper and middle classes took the places of men of the industrial classes who had enlisted had an astonishing effect in securing a new mutual respect between classes hitherto widely apart that could not but have a sound and steadying effect on the nation as a whole.

The working woman was no longer of the one class: it was estimated that about 80 per cent. of England's womankind was employed in some useful capacity towards the end of the first year of war. That some of this energy was scattered on minor utilities was the fault not of the women, but of those to whom their services were offered. Any attempt to do justice to what women did for the nation during the first year of war must of necessity be inadequate, partly because there never was a time when publicity was so little desired, and so much that was generous and splendid was so quietly and unobtrusively done; and partly because during that first year insufficient use was made by the Government of the great number of women willing to give their best energies to whatever form of labour might be of greatest advantage to the nation.

It will, however, always be to the glory of England's women at this time that they, without distinction of class, refused to be stirred out of their steadfast calm by the German attempts to frighten the civil population by coast raids and air raids. A great contempt for an enemy which could not fight with clean hands spread throughout the country. Old sailors on the coast had heard the sound of Drake's drums; the hosts that took part in the horrors of Mons had seen the spirits of the bowmen of old; the women, too, looked back and took heart from the gallant figure of Elizabeth, who banged the doors of her kingdom on a mean race which could not keep faith in business or war. And it was because the men of Central Europe were proved without honour in their dealings with civilian women and little children, that the women could not believe it possible that the Germans could deserve victory. They helped as far as they were allowed to accelerate their defeat.

END OF VOLUME FOUR.

INDEX TO VOLUME IV.

A

Abu Zenaima, attack on, 356
Acland, Hon. F. Dyke, 493
Aircraft: British airmen destroy Courtrai railway station, 395; British drop bombs on advancing Turkish Army, 347; Russian airship bombards railway station at Soldau, 437; Taubes endeavour to destroy railways at Armentières, 10; Zeppelins at Lomza and Bialystok, 437
Alexandra, Queen, work for the wounded, 501
Alexandra Palace, refugees at, 436
Alexandretta, bombardment of, 339–342; description of, 338
American Committee in Paris, work of, 52
American Hospital in Paris, 53
American women in London, start War Relief Fund, 502
Anderson, Dr. Louisa Garrett, 251
Arabs, attitude of the, 331
Ariel, H.M.S., captures *U 12*, 111
Armentières: 3rd Corps occupy, 10; attacks made on the 3rd Corps round, 2, 19; Taubes attempt to destroy railways at, 10
Army Medical Corps, work at the front, 367
Army Medical Service: candidates, regulations, 249; new problems of modern warfare, 43, 55
Army Ordnance Corps, work at the front, 368
Army Service Corps: during the retreat from Mons, 304–311; recruiting in, 295; reorganization of, 281–283; transport work at the Front, 303, 367; transport work in the Gallipoli Peninsula, 312; under shell fire, 307–309; various duties at the Front, 311; work at the bases, 296–299
Ashton, Councillor Margaret, on milk rate, 491
Ashwell, Miss Lena, support to camp concerts, 496
Askold, Russian cruiser, off the Syrian coast, 343
Asquith, Rt. Hon. H. H., on submarine warfare, 84
Astoria Hospital in Paris, 53
Atkins, Colonel A. R. Crofton, Deputy Director of Supply and Transport, 296
Aubers, British progress in direction of, 395
Augustovo, battle of, 189, 190
Australian Army Corps, efficiency of, 334
Australian Hospital at Wimereux, 66
Austria, Archduke Joseph Ferdinand of, in command of fourth Austrian Army, 406

B

Baltic, German raid on the shores of the, 439, 440
Bartfeld: description of country around, 408; Russian attack on, 421
Bartfeld-Dunajec line, 409
Battenberg, Prince Maurice of, killed, 8
Bauer, Corporal William, submarine designer, 89
Bavaria, Crown Prince of, 12
Beatty, Lady, fits out her yacht as hospital ship, 242
Beatty, Vice-Admiral, dispatches on submarines, quoted, 112
Becelaere-Hollebeke road, Germans cross the, 6
Becher, Miss, Matron-in-Chief of Queen Alexandra's Nursing Service, 243
Bedford, Adeline, Duchess of, 483
Bedford College for Women (Regent's Park), work of, 488
Beerenbrouck, Jhr. Chr. J. M. Ruys, work for Belgian refugees, 478, 480
Belgian Repatriation Fund, inaugurated, 498
Belgians, King of the: meets King George, 213; Order of the Garter conferred on, 213
Belgium: distress in, 442; food, distribution of, 450–453; food problem, 447; transportation of, 447–450; railway difficulties, 449; relief and feeding of, 441–456; Relief Commission, financial arrangements, 453–455; organization of, 442, 446
Belgium under the German yoke: the food problem, 441–456
Bell, Colonel E. H. Lynden, C.B., at Boulogne, 59, 65
Below, General von, in command of German Army at Osowiec, 193
Bent, Drummer Spencer J., awarded the V.C., 31
Beskid Mountains, Russians take, 422
Béthune, Germans shell, 233
Béthune-La Bassée-Lille Canal, French resume offensive on, 14
Bhopal, Begum of, gift of hospital ship, 242
Biez, Bois de, shelled, 392
Birmingham, H.M.S., sinks *U 15*, 112
Bissingen, Count von, in command of Austrian "flying column," 430, 433
Bixschoote, French recapture, 19; Germans repulsed at, 34
Bixschoote - Zonnebeke - Zandvoorde line, British take the offensive from, 4
Black, Sir F. W., Director of Contracts, 314
Blackpool, Refugee work at, 467
Bobr, fighting on the, 192
Bobr line, 167
Boehm-Ermolli, General von, in command of third Austrian Army, 406
Bojna, General Borojevic von, in command of second Austrian Army, 406
Bombs, used by British Army, 375
Borzymow, battle of, 171, 172, 176
Borzymow - Wola - Szydlowska line, German attack on the, 170
Boulogne, Hospital organization at, 56
Bourne, William, submarine boat inventor, 86
Bowlby, Sir A., 63
Boyce, Brig.-General, Director of Transport Overseas, 312
Boyle, Lieut.-Commander F. Courtney, in command of *E 14*, 118
Bradford, Sir John Rose, 63
British Army: 3rd Corps mentioned in dispatches, 10; feeding of, 281–313; comparison with Germany, 290; rations, 290; work of depôts, 292; motor transport, 299–303
British Medical Association, work of, 74
British Navy: clothing difficulty, 315; feeding of, 313–320, rations, 317–319; Victualling Department, 314, early history of, 315–317
British Red Cross, Nurses in France, 248
British Red Cross Society: organization of, 246; work done by the, 49, 57
Brook, Lieut. J. A. O., awarded the V.C. and killed, 13
Brooks, Mr. J. H., Director of Victualling, 314
Browne, Miss Sydney, 243, 245
Brunker, General, in command of Indian troops at Givenchy, 219
Brusiloff, General, 405
Budrum, bombardment of, 343
Bukovina, Russian advance to the, 182
Bulfin, Major-General, at Ypres, 1, 23, 30; wounded, 32
Bulgakoff, General, in command of 20th Army Corps (Russian), 189, 190
Buller, Sir Redvers, work with Army Service Corps, 282
Bushman, Lady, ambulances scheme, 502
Bushnell, David, inventor of submarine boat, 88
Byng, Major-General the Hon. Julian, at Kruiseik, 13; at Zandvoorde, 17

Bzura, fighting on the, 175–177
Bzura-Rawka line: operations on the, 170, Russian defences on the, 165

C

Cambridge, work for wounded and refugees, 487
Camel Transport Corps, in Egypt, 360
Camps, waste in, 511
Canadian Hospital at Le Touquet, 66
Canadian Red Cross Hospital at Cliveden, 72
Canteens, for use of men travelling to and from the Front, 502
Capper, General, 22
Carnegy, General, at Givenchy, 219
Carpathians: Austro-German offensive in the, 172–173; Easter Day in the trenches, 435; fighting in the, 177–186; geography of, 408–417; position in the, at time of the fall of Przemysl, 404, in April, 1915, 423; railway strategy in the, 405; roads of the, 412; Russian captures in the, 424–427; Russian offensive in the, 401–440
Carpathian zone: described, 165, 166; Russian offensive in, 177–186
Carter, Brig.-General E. E., Director of Supplies Overseas, 312
Cassel, Lady Helen, President of St. Pancras branch of Soldiers' and Sailors' Families Association, 504
Castelnau, General de, 14, 19
Cavan, Lord: at Bixschoote, 35; in command of 4th Infantry Brigade, 17, 30
Charlesworth, Mrs., Colonel of Women's Volunteer Reserve, 494
Children's Aid Committee, work of, 505
Christian, Princess, organizes hospital train, 502
Christmas Day truce, 221–228
Church Army, Women's Relief Department, work of, 508
Ciocanestie, fighting round, 183
Civilian Force, work of the Women members, 496
Clio, H.M.S.: in Suez Canal, 347; damaged, 352
Comité National de Secours et d'Alimentation, organization of, 442
Commissariat: Feeding of the Army and Navy, 281–320; in earlier campaigns, 284–289
Connaught, Princess Arthur of, enters St. Mary's Hospital as probationer, 502
Conneau, General, Grand Cross of St. Michael and St. George conferred on, 213
Cookery Classes for soldiers and sailors, 511
Courtrai, railway station wrecked, 395
Cowan, Mrs., organizes week-end scheme at Vickers factories, 481
Cowdray, Lady, lends house for Women's Exhibition, 482
Cox, General, at El Kantara, 352
Cracow, German concentration round, 428
Crook-Lawless, Lady, hospital work at Netley, 69
Cuinchy, British gain positions near, 237
Czernowitz: Austrians enter, 430; fighting round, 431; Russian retreat at, 185

D

Dardanelles: Army Service Corps, work in, 312; submarine exploits in the, 118
Dawson, Sir Bertrand, 63
Dawson, Commander Sir Trevor, on submarines, 84
Deimling, General von, 12, 23
Delorme, Dr., on treatment of the wounded, 53, 54
de Mitry, General, Grand Cross of St. Michael and St. George conferred on, 213
D'Entrecasteaux, French cruiser: shells trenches at Tarsus, 343; in Suez Canal, 347
Desaix, French cruiser, lands reconnoitring party near Akaba, 344
Desart, Ellen, Lady, work with Children's Aid Committee, 505
de Son, inventor of submarine boat, 87
D'Estrées, French cruiser: at Alexandretta, 343; destroys house of German Consul at Haifa, 344
Devonshire, Duke of, lends Devonshire House to British Red Cross Society, 247
Dixmude, Germans attack, 4, 36, 39
Djemal Pasha: biographical, 330, 331; at Katayib el Kheil, 349; in command in Egypt, 328, 330; plans of attack in Egypt, 348
Dmitrieff, General Radko, 406
Dniester: description of, 428–430; fighting on the, 185, 417
Dobrzyn, Russians reach, 186
Doris, H.M.S., bombards Alexandretta, 339
Drebbele, Dr. Cornelius van, submarine boat inventor, 87
Dubois, General, Grand Cross of St. Michael and St. George conferred on, 213
Dufferin, H.M.S., at Muweilah, 344
Dukla Pass, 413
d'Urbal, General: commanding the French Army in Belgium, 15; Grand Cross of St. Michael and St. George conferred on, 213

E

Earl's Court, Refugees at, 466
East Prussia: failure of German offensive, 174; German operations in, 173–175, 186–195
Egypt: Colonial troops in, 335; events in Spring 1915, 356–360; previous invasions, 321; railways, administration of, 359; strength of British garrison, 334; Turkish attempt to invade, 321–360
Egypt, Sultan of, attempted assassination of, 359
Eichhorn, General von, 191
El Arish, shelled, 343
El Kantara: attempt to rush British outposts at, 347; Indians repulse Turks at, 352; Turkish raid on, 357
Enticott, Lance-Corporal J., awarded the D.C.M., 17
European War Fund, Ladies Committee, 483
Evans, Major, in command of British Red Cross convoy, 57

F

Fabeck, General von, 12
Fanshawe, General, at Neuve Chapelle, 387
Fauquissart–Neuve Chapelle–Givenchy, British line at, 3
Fawcett, Mrs., appeal to National Union of Women's Suffrage Societies, 273
Foch, General, 15
Forbes, Lady Angela, Boulogne buffet, 502
France, winter campaign in, 201–240
French, Field-Marshal Sir John: biographical, 121–160; characteristics of, 153–156; boyhood of, 126; naval career, 126; joins the Army, 128; in command of 2nd Cavalry Brigade at Canterbury, 134; work at Aldershot, 124; at the War Office (1895), 134; in Egypt, 131–133; in South Africa, 136–151; at Elandslaagte, 138; at Ladysmith, 137; relief of Kimberley, 144; arrives in England after South African War, 151; appointed Inspector-General of the Forces (1907), 153; appointed Chief of the Imperial Staff (1911), 153; the Curragh crisis, 122; appointed Commander-in-Chief of the British Expeditionary Force, 121; arrival in France, 124; breaks up and rearranges the IV Corps, 7; British offensive at Neuve Chapelle, 379; speech to troops at Neuve Chapelle quoted, 386; on King's visit to France, 214; on the fighting around Gheluvelt, 25; Order of Merit conferred on, 214; dispatches quoted, 10, 27, 158, 202; life at the British Headquarters, 157–160
French, Lady, President of Women's United Services League, 506
French Navy, takes over entire observation of Syrian Coast, 343
Frere, Bandsman T., awarded the D.C.M., 17
Fulton, inventor of the submarine, 86, 88

G

Gallie, Colonel, work on railway systems, 65
Gallipoli Peninsula, Army Service Corps in, 312

Garry, British destroyer, rams the *U 18*, 111
Gaskell, Mrs., War Library scheme, 502
Gas poisoning cases, medical treatment, 65
George V., King: meets King of the Belgians, 213; visits troops at the Front, 209, 211–214
Gerard, Mr. James, American Ambassador in Berlin, 446
German Army, feeding of, comparison with British, 290
Gheluvelt, British attacked in neighbourhood of, 1, 23; British evacuation of, 33; British recapture, 8, 26; fighting at, 13
Ghurkas, at Festubert, 210
Girls' Patriotic Union of Secondary Schools: founded, 488; work of, 490, 491
Givenchy: 1st Corps at, 392; fighting at, 4, 39; Germans attack, 236; Indian troops at, 217, 219, 221.
Gladstone, Lady, on War Refugees Committee, education department, 464
Glasgow, Refugee work in, 467
Goloveczko, Germans repulsed at, 426
Gorlice-Bartfeld line, 408
Gough, General Hubert, 27; and the Curragh crisis, 122
Grande Dune, Allies attack on the, 238
Grenades, hand, use of, 375–376
Grodno, operations round, 191
Grossetti, General, 34; Grand Cross of St. Michael and St. George conferred on, 213

H

Haig, General Sir Douglas: 7th Infantry Division and 3rd Cavalry Corps placed under command of, 7; advances towards the Wervicq - Westroosebeke road, 10; at Neuve Chapelle, 379, 391; dispositions in front of Ypres, 22; on conduct of British troops at battle of Ypres, 40; ordered to support Indian troops at Givenchy, 221; with Sir John French at Ypres, 25
Haldane, Lord, on Sir John French, 122
Hankey, Major E. B., in command of the Worcesters at Gheluvelt, 26
Hansen, Commander, on submarine work, 117
Hardinge, H.M.S., in Suez Canal, 347; damaged, 351
Harley, Mrs., in France, 253
Hartegg, Dr., attempt to raise recruits at Nablus, 333
Hela, German cruiser, sunk by British submarine, 116
Heligoland Bight, submarines' part in operations, 83
Herbert Hospital, Woolwich, 70
Herrick, Mr., American Ambassador in Paris, works for the wounded, 52
Herringham, Sir W., 63
Hindenburg, General von, 161, 169, 170
Hobhouse, Mrs. C. E., President of Post Office Relief Fund, 509
Hodson, Bandsman A. R., awarded the D.C.M., 17
Hogan, Sergeant John, awarded the V.C., 14
Holbrook, Lieutenant, in command of the *B 11*, 118
Holland, Belgian refugees received in, 475–477
Holland, Mr. J. P., submarine inventor, 93
Hollebeke, British attacked round, 17
Hooge, Moussy's Cavalry Brigade moved to, 26
Hoover, Mr. Herbert C., 444, 456; Chairman of Commission for Relief in Belgium, 443
Horsley, Sir Victor, 63
Horton, Commander Max Kennedy, promoted for sinking German destroyer, 116
Hospital bases: Boulogne, 44, 56; Havre, 46–49; Paris, 52
Hospitals: Australian at Wimereux, 66; British at Troyes, 253; Canadian at Le Touquet, 66; Canadian Red Cross at Cliveden, 72; Indian at Brighton, 72; King George's, 71; Lady Hardinge Hospital at Brockenhurst Park, 72; London Hospitals, work of, 70–73; Netley, 67; Provincial, work of, 71, 72; Royal Victoria Hospital, Netley, 68; Scottish Women's Hospitals, 252; Sophie Berthelot Hospital in Calais, 67; various offers of private houses, 72; Voluntary Aid Detachment, 248; Women's Military in London, 251; Table of enlarged Territorial, 244
Hotchkiss gun, description of, 378
Howitzers, Krupp, description of, 378

I

Indian Army: in Egypt, 352; Lahore Division reinforce Smith-Dorrien's troops, 3
Indian Medical Service, cooperation with Royal Army Medical Corps, 56
Indian troops at Givenchy, 217, 219
Infant mortality, problems, 491
International Women's Relief Committee, 497; work of, 498
Ismailia: action near, 349; strength of Turkish force concentrated for attack on, 345
Ivanoff, General, 406
Iveagh, Lord, helps to equip Netley Hospital, 68

J

Jacobeni, fighting round, 183
Jasliska, fighting near, 421
Jeanne d'Arc, French cruiser, destroys petrol depôt at Makri, 343; shells El Arish, 343
Jellicoe, Lady, President of Women's United Services League, 506
Joffre, General, at the Flanders Front, 15; Grand Cross of the Bath conferred on, 213
Juson-Kerr, Mrs., War Club scheme, 506

K

Kaiser, The: at Courtrai, 30; before Ypres, 15; present at operations around Soissons, 230
Kalusz, Austro-German advance towards, 173
Kavanagh, General, at Bixschoote, 35
Keogh, Sir Alfred, Director-General of the Army Medical Service, 59, 74, 245, 249
Keyes, Commodore, dispatches quoted, 83, 115
Khudadad Khan wins the V.C., 17, 18
Kimpolung, Russians reach, 182
King George's Hospital, 71
Kingston, Lieut., Earl of, describes scene at battle of Ypres, 31
Kirlibaba, Russians occupy, 183
Kitchener, Field-Marshal Lord: accepts services of Women Patrols, 510; speech quoted, 37
Kitchenko, General, in command of Russian troops in Pruth district, 430
Klein Zillebeke, French reinforcements at, 19
Kluck, General von, at Soissons, 229
Kolomea, fighting round, 185
Kovno, Russians retreat to, 189
Koziowa, fighting at, 180
Krasno, Germans retire, 437
Krasnosielec, Germans defeated at, 194
Kressenstein, Colonel Kress von, 328, 331; arrives in Jerusalem, 345
Kruiseik, British reach, 6; British recapture hill at, 13
Kusmanek, General Hermann von, Commander-in-Chief of Przemysl, 197; issues order to troops of Przemysl, 198
Kuyumdjian Effendi, Governor of Mount Lebanon, 334

L

La Bassée, fighting round, 233
La Bassée - Béthune road: British attacked on the, 236; British reinforcements on the, 235
La Boutillerie, fighting at, 2
Ladies' Automobile Club, work of, 502
Landon, General, 25
Lange, Herr, 333
Lansdowne, Lady, appeal for Officers' Families' Fund, 503
Laubeuf, M., French submarine designer, 100; on German submarines, 96
Lauenstein, General von, in charge of 39th German Reserve Corps, 437
Lawford, General, 23
Lawley, Sir Arthur, 59
Leach, Lieut. James, awarded the V.C., 14
Lebanon, Mount, Turkish troops occupy, 333
Le Gheir, Germans attack, 14

l'Epinette, British attack at, 397
L'Estrange, Major, in command of British Red Cross convoy, 57
Le Touquet, Canadian Hospital at, 66
Libau, bombardment of, 440
Limerick, Lady, in charge of canteen, 502
Linsingen, General von, in command of German Army in the Carpathians, 406
Lloyd George, the Rt. Hon. David, receives Women's deputation, 481
Lomax, General, at Gheluvelt, 22; wounded, 25
Lombartzyde, British capture, 216
Londonderry, Lady, Colonel-in-Chief of Women's Volunteer Reserve, 494
London Scottish, charge of the, at Messines, 29
Long, Major-General S. S., Director of Supply and Transport, 296
Lugard, Lady, Belgian refugee work, 460; organizes housing of Belgian refugees, 464
Lupkow Pass, 413; operations in the, 179
Lupuis, Captain, inventor of the torpedo, 106
Lusitania, Cunard liner, sunk by German submarine, 85 86
Lycée Pasteur, organization of, 52
Lyttelton, Mrs. Alfred, Belgian refugee work, 460, 463

M

Macbean, General, at Givenchy, 219
McCarthy, Miss, principal Matron of Queen Alexandra's Service, 243
McCaul, Miss Ethel, founder of War Hospital Supply Depôts, 484
MacCormick, Sir A., 63
McKechnie, Mr. James, Director of Vickers' Works, 93
McKenna, Mr., sets suffragette prisoners free, 271
Macmillan, Miss Chrystal, directs shipping of food to Flushing for refugees, 498
Magora, strategical importance of, 411
Mahan, Admiral, on submarine warfare, 86
Maistre, General, Grand Cross of St. Michael and St. George conferred on, 213
Makins, Sir G. H., 63
Mallet, Sir Louis, British Ambassador in Turkey, 331
Marlborough, Duchess of: Hon. Treasurer of Women's Emergency Corps, 494; lends Sunderland House for Motherhood meeting, 492
Marwitz, General von der, in charge of 38th German Reserve Corps, 437
Mary, Princess: appeal for Christmas boxes, 501; Patroness of Girls' Patriotic Union of Secondary Schools, 488
Mary, Queen: inaugurates Queen's "Work for Women" Fund, 256; interest in Officers' Families Fund, 504; visits St. Marylebone Depôt of War Hospital Supply, 484
Maud'huy, General de, 14; advance on Vermelles, 19; Grand Cross of St. Michael and St. George conferred on, 213
Maxwell, General Sir John, in Egypt, 360
Medical work in the Field and at Home, 41–80
Memel: Russians enter, 438; Russians evacuate, 439
Merry del Val, Señor, work connected with Belgium, 442
Messines, Germans occupy, 29
Messudijeh, Turkish battleship, damaged by British submarine B 11, 118
"Minenwerfer" (trench mortars), use of, 14
Milman, Lady, Chairman of Needlework Committee of Primrose League, 500
Minerva, H.M.S., in Suez Canal, 347
Mlava, Germans driven from, 186
Mogily, fighting at, 176
Mohammed Khalil attempts to assassinate Sultan of Egypt, 359
Moir, Mrs., organizes week-end scheme at Vickers' factories, 481
Mons, battle of, Royal Army Medical Corps at, 44
Mons, retreat from, work of Army Service Corps, 304–311
Mont-des-Cats, German failure to reach, 31
Moore, Miss Decima, organizes Women's Emergency Corps, 494
Moraht, Major, on Hungarian feeling, 407
Mortars, use of, 376, 377
Moussy, General, 23; at Gheluvelt, 26
Munitions, Women demand to make, 481
Munition Workers' Auxiliary Committee formed, 507
Murray, Brig.-General, work amongst the troops in France, 508
Murray, Dr. Flora, 251

N

Nadvorna, fighting round, 185
Narev line, 167
National Food Fund, organization of, 465, 494
National League for Opposing Woman Suffrage, work of, 276
National Register, women included, 481
National Relief Fund Committee, work of women members, 500, 501
Netherlands, Queen of the, on Belgian refugees, 474
Netley Hospital, 68, 69; description of, 67–70
Neuve Chapelle: artillery preparations, 383; battle of, 379–400; British advance on, 385; British bombardment of, 383–389; British capture, 389; British casualties at, 395; British retake, 9; description of, 382; German attempt to recapture, 393–395; German casualties at, 396; German machine guns at, 391; German position round, 383; German reinforcements in, 390; Germans take, 8, 31; Indian Army at, 9, 390; Lahore Division around, 3; position round, October, 1914, 379, 382; results of, 397–399; Sir J. French's speech to troops quoted, 386; West Kents distinguish themselves at, 6
Neville, Private F., awarded the D.C.M., 13
Niemen: German advance on the, 187; Germans cross the, 174; Germans reach the, 191; Russian line of defence on the, 167
Nieuport: bombardment of, 228; German attack on, 4
Northbrook, H.M.S., 344
Norway, Queen Maud of, offer of outbuildings for hospital, 72
Nurses, Overseas contingents, 249

O

Ocean, H.M.S., in Suez Canal, 347
Officers' Families' Fund, problems of, 503, 504
Oram, Vice-Admiral Sir Henry, Engineer-in-Chief of the Navy, 94
Order of St. John of Jerusalem: nursing organization, 247; work of, 55, 56
Osowiec: bombardment of, 193, 437; German failure near, 192
Oud Stuyvekenskerke, French reoccupy, 34
Oxford, work for wounded and refugees at, 485

P

Page, Corporal A. A., awarded the D.C.M., 17
Page, Mr. W. Hines, work connected with Belgium, 442
Paget, Lady, starts War Relief Fund, 502
Pankhurst, Mrs., 271
Papp, Colonel, in command of Austrian troops in Pruth district, 430
Parker, Mrs., starts White Rose League, 506
Passandière, M. de la, commander of French cruiser *D'Estrées*, 343
Petrograd-Warsaw line, strategic railways on the, 167
Pflanzer-Baltin, General Freiherr von, in command of Austrian Army on Eastern frontier, 183; in the Pruth district, 406, 417
Philomel, H.M.S., under fire at Alexandretta, 342
Piètre Mill, British attempt to capture, 392
Ploegsteert ("Plug Street") Wood; British capture trenches at, 35; British defence of, 18; Germans attack, 14
Plumer, Sir Herbert, at St. Eloi, 399

Poincaré, President, at the Front, 15; King's guest at British Headquarters, 213
Poland, Western, situation in December, 1914, 161
Police women, 510
Polish zone, description of country, 162
Poloniny Range, Russian assault, 423
Portland, Duke of, President of British Ambulance Committee, 77
Post Office Relief Fund, organization of, 509
Prasnysz: battle of, 175; German advance on and Russian evacuation, 194
Primrose League, Needlework Committee, work of, 500
Princess Christian, hospital train supplied, 77, 78
Procter, Lady, 510
Projectiles, modern, 368–375
Prowse, Major, 18
Prussia, Prince Joachim of, in Memel, 439
Prussian zone, East, 167
Pruth district, fighting in the, 430
Przemysl: defences of, 199, 200; fall of, 173, 186, 195; siege of, 165, 196–199
Puczak, Russians capture, 421
Pulteney, General, in command of 3rd Corps in Flanders, mentioned in dispatches, 10

Q

Quakers, work of women, 499
Queen Alexandra Relief Fund for War Nurses, 250
Queen Alexandra's Imperial Military Nursing Service, mobilization of, 243
Queen Mary, H.M.S., attack by German submarine, 112
Queen Mary's Needlework Guild: at Oxford, 486; first Council of the, 267; formation of, 242; surgical branch, 484; work of, 268–271
Queen's "Work for Women" Fund, Committee formed, 256; work of, 257–265
Quesnoy, railway station bombarded, 389
Quesnoy-en-Santerre, stormed by the French, 14, 19

R

Ramscappelle, Germans capture, 19; recaptured by French, 22
Ranken, Captain Harry S. (R.A.M.C.), awarded the V.C. after death, 45
Rawka, fighting on the, 175–177
Rawlinson, General Sir Henry: arrives in England to supervise mobilization of 8th Infantry Division, 7; at Neuve Chapelle, 385
Recruits, medical examination of, 73
Red Sea, operations in the, 1914–15, 337, 344
Refugees, Belgian, 457–480; Aldwych dispensary, 464; Aldwych, various departments at, 465; at Alexandra Palace, 466; at Earl's Court, 466; Blackpool, work at, 467; Dutch Commission formed, 478; Dutch Government measures, 478; Dutch hospitality, 478; education problem, 469; employment problems, 467, 470–474; flight to England, 457, 459; housing arrangements and hospitality, 461–463; in Holland, 474–480; registration statistics, 459
Requin, French warship, in Suez Canal, 347
Roberts, Lord, death of, 207
Robertson, Miss, President of Girls' Patriotic Union of Secondary Schools, 490
Robinson, Rear-Admiral, services in Egypt, 359
Ronarc'h, Admiral, at the Yser, 39
Ropa, village of, fighting round, 411
Roshan Bey, 331
Royal, Princess, work on the Red Cross, 501
Royal Army Medical Corps: at battle of Mons, 44; at battle of the Aisne, 45
Royal Naval Nursing Service, 246
Royal Victoria Hospital at Netley, description of, 68
Royaumont, First British Nursing Unit at, 252
Rozstoki Gonne, Russians capture, 424
Rozstoki Pass, Austrian failure in the, 424
Russell, Lieut. J. R., awarded the D.S.O., 6
Russian campaign: offensive in the Carpathians, 401–440; position in the Polish zone at the beginning of 1915, 162–169
Russian Poland, description of frontier, 162; railway communication in, 164
Russian retreat in East Prussia, 189
Russian winter campaign, last phases of the, 161–200

S

S 126, German destroyer, sunk by British submarine, 116
Sadagora, Russians evacuate, 431
St. Eloi, action at, 399, 400
St. Georges: Allies take, 228; British capture, 216
St. John Ambulance Association, formation of in 1877, 483
St. John of Jerusalem, Order of, nursing organization, 247; work of, 55, 56
St. Lawrence, British trawler, sunk by submarine, 85
St. Louis, French battleship, bombards Turkish entrenchments at El Arish, 343
St. Marylebone Depôt, Surgical Branch of Queen Mary's Needlework Guild, 484
Salvation Army, work of women members, 507
Samuel, Rt. Hon. Herbert, offers hospitality to Belgium on behalf of the Government, 463
Sassoon, Mrs. Arthur, 504
Sawyer, Surgeon-General, 65
Scharlieb, Dr. Mary, on infant mortality, 491; on medicine for women, 255
Schleswig-Holstein, Princess Victoria of, Chairman of Ladies' Auxiliary Committee, 502, 507; President of Munition Workers' Auxiliary Committee, 507
Scott, Admiral Sir Percy, on submarines, 81–85
Scottish Women's Foreign Service Hospital, unit sent to Troyes, 488
Scottish Women's Hospitals, organization of, 252
Seely, Brig.-General, and the Curragh crisis, 122
Selborne, Lady, President of Belgian Repatriation Fund, 498
Selivanoff, General, 405; in command of Przemysl siege army, 197
Serbia, medical staff in, 253
Shaw, General, 18, 27
Shell fire, medical effects of, 45
Shells, high explosive, used, 372
Shillington, Colonel, in charge of Canadian Hospital at Le Touquet, 66
Shrapnel, use of, 371
Shrapnel, Colonel, inventor of the shell, 370
Siddons, Acting-Sergt. W., wins the D.C.M., 27
Sierpiec, Russians occupy, 186
Sinai Peninsula, geographical description of, 323–326
Sloggett, Lady, Chairman of Warehouse Committee of European War Fund, 483
Sloggett, Surgeon-General Sir Arthur, 59
Smith-Dorrien, General Sir Horace, 10; at Neuve Chapelle, 8
Smyth, Lieut. G. B. Ferguson, awarded the D.S.O., 4
Soissons: bombardment of, 229; French retreat owing to flooding of the Aisne, 231; heavy engagements in the district of, 229–233
Soldiers' and Sailors' Families Association, work of, 504
Sophie Berthelot Hospital at Calais, 67
Sproston, Corporal A. J., diary quoted, 10
Stanislawow: Austrian occupation of, 173; Russians evacuate, 185; Russians re-enter, 185, 401
Stedman, Major, in charge of Sophie Berthelot Hospital at Calais, 67
Steinbach, French capture, 229
Stobart, Mrs. St. Clair, 251
Subha Singh, Havildar, awarded Indian Order of Merit, 357
Submarine and its work, the, 81–120
Submarine blockade, German, 84–86
Submarine boat: Bauer's designs, 89; Bourne's invention, 86; Bushnell's invention, 88; evolution of, 86–111; Fulton's invention, 86, 88, 89; Holland's designs, 93
Submarines: Armament of, 106; guns on, 109–111; mechanism of submerging, 116; types of machinery in, 112–115; work of the periscope, 116
Submarines, Austrian, 98

Submarines, British: *B 11* damages Turkish battleship *Messudijeh*, 118; development of, 93–95; *E 9* sinks German destroyer *S 126*, sinks the *Hela*, 116; *E 11* sinks troopship at Constantinople, 84; *E 14* sinks Turkish gunboats and transports in the Dardanelles, 118
Submarines, French, development of, 99–101
Submarines, German, development of, 95–98; rammed by the *Thordis*, 111; *U 12* captured by H.M.S. *Ariel*, 111; *U 15* sunk by H.M.S. *Birmingham*, 84, 112; *U 18* rammed by the *Garry*, 111
Submarines, Italian, 102, 104
Submarines, Russian, 102
Sueter, Captain M. F., work in submarine construction, 92
Suez Canal: defences of, 335, 337; fighting at, 350–354; strategical importance of, 322; Turkish failure on the, 355
Suffragettes: attitude during the War, 272; work of the, 271–276
Syria: events in, 1914–15, 332–334; Holy War proclamation received, 332; naval work on coast of, 1914–15, 337
Swiftsure, H.M.S., in Suez Canal, 347
Sztropko, Russians reach, 421

T

Tamassy, General Arpad von, at Przemysl, 197
Teck, Princess Alexander of, interest in munition workers, 502
The Times Fund for the Sick and Wounded, administration of, 56
Thomson, Sir Courtauld, 59
Thordis, British merchant ship, rams German submarine, 111
Three Arts Club Employment Bureau, work of, 495
Thurston, Mr. T. G. Owens, Naval Constructor at Vickers, 93
Tilsit, Russian advance on, 187
Tor, arrival of Turkish troops at, 355
Torpedo construction, 106–109
Transport, motor, 299–303
Trenches: feeding of the men in, 367; life in, 361–366
Trench work and trench weapons, 361–378
Trommer Pasha, von, in command of 10th Division Turkish Army, 330, 345
Troyes, British hospital at, 253
Tulloch, Captain R. G. M., on West Kents' experiences at Neuve Chapelle, 6
Turkish advance on Suez Canal, 345–356; failure of, 358
Turkish Army: mobilization, 329; strength of force directed against Egypt, 346; transport organization, 346
Turner, Captain, evidence on sinking of *Lusitania*, 85, 86
Tussum-Serapeum line, occupied by Allied troops, 349

U

Underwood, Mr., account of fighting at Ypres, 2, 13
Union of Jewish Women, work of, 499, 500
Uzsok Pass, 415; battle for the, 425; fighting in the, 178–180

V

Van der Linden, Mr. P. W. A. Cort, 480
Vandervelde, Madame, inaugurates Belgian Repatriation Fund, 498
Vermelles, French capture, 216
Vickers, Messrs., week-end women volunteer scheme, 481; work in building submarines, 93
Victoria, Princess, work for the wounded, 501
Villalobar, Marquis de, Spanish Minister in Brussels, 442
Vistula: description of, 163, 167; Russian strategy on the, 164
Vola Michova, Russians capture, 423
Volosate, fighting in, 425
Voluntary Aid Detachments, work of, 76, 80, 249

W

Wales, Prince of, appointed Aide-de-Camp to Sir John French, 211; in France, 160
Wangenheim, Baron von, German Ambassador in Turkey, 331
War Clubs, organization of, 506
War Hospital Supply Depôts: founded, 484; various branches formed, 485
War Loan, Women's part in the, 481
War Refugees Committee: appeal of, 461; Committee of Management formed, 464; transport department, 464; work of, 463–466
War Register, formation of, by Board of Trade, 276
Watkis, Major-General, in command of the Lahore Division, 3
Webb, Sergt. H., wins the D.S.M., 4
Wedgwood, Mrs., scheme for Belgian women, 499
West Kents distinguish themselves at Neuve Chapelle, 6
White, Lieut. H. T. H., awarded the D.S.O., 6
Whitehead, Mr. Robert, inventor of the torpedo, 106
White Rose League, started by Mrs. Parker, 506
Whitlock, Mr. Brand, American Minister in Brussels, 442
Williams, Mr. Basil, Belgian refugee work, 463
Willington, Sergt. R., awarded the D.C.M., 2
Wilson, General, 355
Wimereux, Australian Hospital at, 66
Women: American in London, work of, 502; demand in agricultural and farming districts, 482; clubs, work of, 502; gifts from the Dominions, 268; replacemen, 276–280; thrift amongst, 510; unemployment problems, 256, 495; volunteers for war service, 276–280; work at Cambridge, 486, 487
Women doctors: appointments, 254; work of, 250
Women patrols, work of, 510
Women's Emergency Corps: organization of, 242, 494; work of, 494
Women's Hospital Corps, organization of, 251
Women's Imperial Health Society, 493
Women's League of Service, 493
Women's Liberal Federation, work of, 500
Women's Social and Political Union, deputation to Mr. Lloyd George, 481
Women's United Services League, formation of, 506
Women's Volunteer Reserve, formation, 494
Women's Work in the War, 241–280, 481–512
Worcesters mentioned in dispatches, 26
"Work for Women" Fund—see Queen's "Work for Women" Fund.
Wounded Allies Relief Committee, Women's work in connexion with, 254
Wright, Sir Almroth, work in Boulogne Casino Hospital, 62
Wurtemberg, Duke of, 12; attack on Dixmude, 36
Wysocko-hizne, Russians capture, 425
Wyszkow Pass, German advance checked in the, 180
Wytschaete: British and French attack, 216, 217; French attack on, 32; French gain ground near, 203; Germans occupy, 28

Y

Younghusband, General, 357
Yperlee Canal, French cross, 12, 19
Ypres: battle of: "Eye-witness's" dispatches quoted, 206; battle of (second phase), 1–40; bombardment of, 18, 32, 33, 203; bombardment of British line round, 202; further attack on, 206; German strategy at, 17; history of, 204–206; situation round, Corporal A. J. Sproston's diary quoted, 10
Ypres-Comines Canal, fighting on the, 239, 240

Z

Zaleszczyki, fighting round, 431–433
Zandvoorde: 3rd Cavalry Division hold the line at, 2; Germans attack, 17
Zandvoorde–Gheluvelt road, British rally at, 13
Zboro, Russian advance on, 419
Zonnebeke, British hold the line at, 27

ILLUSTRATIONS IN VOLUME IV.

PORTRAITS.

PAGE

H.M. The King ... 158, 208
H.M. The Queen ... 79, 467
H.M. Queen Alexandra ... 79
H.R.H. The Prince of Wales... ... 79, 160
H.R.H. The Princess Mary 258

Ashwell, Miss Lena ... 498
Askwith, Lady 256
Asquith, Miss Elizabeth... 497
Atkins, Colonel A. R. Crofton 296
Austria, Archduke Frederick of 432
Austria, Archduke Joseph of 432

Barclay, Miss 259
Battenberg, the late Prince Maurice of 8
Beal, Lieut. B. A.... ... 85
Bedford, Adeline, Duchess of 509
Beerenbrouck, Jhr. Ruys de 480
Belgians, King of the ... 442
Belgians, Queen of the ... 445
Benn, Mr. Wedgwood, M.P. 303
Bent, Drummer Spencer John, V.C. 40
Below, General von ... 179
Bingley, Colonel A. H. ... 359
Bliss, the late Lieut.-Col. W. M.... 397
Boehm-Ermolli, General von 407
Bojna, General Borojevic von 406
Bondfield, Miss Margaret G. 260
Borthwick, Miss Jessie ... 54
Boyle, Lieut.-Commander E. C. 95
Buchanan, Miss 165
Burns, Mr. W. 491

Carter, Brigadier-General E. E. 311
Cavan, Brigadier-General The Earl of 14
Chamberlain, Mrs. Austen 255
Christian, H.R.H. Princess 75
Churchill, Lady Randolph 491
Connaught, H.R.H. Princess Arthur of ... 488
Cowans, Major-General Sir John S. 300
Cowdray, Lady 483
Creagh, Lieut.-Commander James V. 103

PAGE

Crewe, The Marchioness of 254

Dawnay, the late Major The Hon. Hugh ... 8
Dawson, Commander Sir Trevor 83
Depew, Senator Chauncey 491
Derbyshire, Gunner, V.C. 152
Devonshire, The Duchess of 250
Dickinson, Mr. W. H., M.P. 466
Dimmer, Captain J. H. S., V.C. 35
Djemal Pasha, General ... 333
Dorrell, Sergeant-Major, V.C. 152

Eichhorn, General von ... 167
Emmott, Lady 499
Enver Pasha 349

Farquhar, the late Lieut.-Colonel F. D.... ... 396
Favre, Mlle. 259
Fell, Lieutenant D. M. ... 85
Fenton, Miss Eva... ... 264
Fletcher, Miss 244
Fox, Mrs. Dacre 488
Fremantle, Commander Charles 92
French, Field-Marshal Sir John ... 122, 123, 124, 125, 127, 129, 138, 139, 140, 141, 145, 146, 148, 154, 155
French, Lady 505

Gaskell, Mrs. 511
Gasson, Mrs. 255
George V., King ... 158, 208
Gladstone, Viscount ... 466
Gleichen, Major-General Count... 14
Graham, Sir Ronald ... 358

Halahan, Lieut.-Commander R. C. ... 93
Hall, Captain S. S. ... 82
Harcourt, Mrs. Lewis ... 491
Harley, Mrs. 43
Henry, Lady 491
Hobhouse, Mrs. 507
Hogan, Sergeant John, V.C. 29
Holland, Mr. J. P. ... 95
Hoover, Mr. Herbert C. ... 444
Hoover, Mrs. 491
Horton, Lieutenant Max K. 91

Jellicoe, Lady ... 79, 261
Joffre, General ... 129, 138, 155

PAGE

Kaiser, The ... 177, 424
Kavanagh, Major-General C. T. McM 14
Keogh, Sir Alfred... ... 57
Kitchener, Lord 282

Laubeuf, Monsieur ... 102
Laurenti, Signor Caesar ... 102
Laurie, the late Lieut.-Colonel G. E.... ... 396
Leach, 2nd Lieut. J., V.C. 29
Lethbridge, Lady... ... 246
Linlithgow, The Marchioness of 75
Linsingen, General von ... 406
Lipton, Sir Thomas ... 53
Lloyd George, The Rt. Hon. D., M.P. ... 483
Lloyd George, Mrs. 263, 506
Long, Major-General S. S. 296
Lyttelton, The Hon. Mrs. Alfred 257

MacArthur, Miss Mary ... 256
McKechnie, Mr. James ... 95
Marlborough, The Duchess of 491
May, Sir Arthur 75
Midleton, Viscountess ... 255
Murray, Dr. Flora ... 251
Murray, "Brigadier" Mary 506

Nasmith, Lieut.-Commander M. E. 120
Netherlands, The Queen of the 479
Norfolk, The Duchess of... 250

Oram, Vice-Admiral Sir Henry J. 83
Osborne, Driver, V.C. ... 152

Pankhurst, Mrs. 261
Pearson, Mrs. 257
Pflanzer-Baltin, General Baron von 407
Phillips, Dr. Marion ... 260
Poincaré, President ... 9
Poland, Lieut. A.... ... 93
Pole-Carew, Lady Beatrice 251
Pope, Lieut. R. K. C. ... 85
Portugal, H.M. Queen Amélie of 79
Procter, Lady 505

Ranken, Capt. H. S., V.C. 46
Rhodes, Mr. Cecil ... 148
Roberts, the late Earl 125, 204
Robinson, Rear-Admiral... 359
Roxburgh, Lady 254

PAGE

Russia, The Tsar of 163, 402, 403
Russia, The Grand Duke Michael Alexandrovitch ... 174, 175, 199
Russia, The Grand Duke Nicholas of, 163, 187, 403

Samuel, The Rt. Hon. Herbert 465
Sassoon, Mrs. Arthur ... 504
Schleswig-Holstein, H.R.H. Princess Victoria of... 500
Schofield, Lieut. W. R. ... 85
Scott, Admiral Sir Percy... 82
Selborne, Lady 499
Somerset, The Duchess of 508
Storrs, Mr. R. 358
Stuart, Mr. Th. 478

Talbot, Commander C. P. 85
Teck, H.H. The Duke of... 207
Teck, H.S.H. Prince Alexander of 207
Thurston, Mr. T. G. Owens 113
Torby, The Countess Nada 259
Torby, The Countess Zia... 259
Trommer, Colonel von ... 333
Turner, Lieut.-Commander R. R.... 85

Uniacke, the late Lieut.-Colonel H. P. ... 396
Uniacke, the late Lieut.-Colonel R. F. ... 396

Van der Linden, Mr. P. W. A. Cort 478
Varley, Lieut. C. H. ... 93
Verscheuren, J., and wife 463

Walford, the late Major G. H. 395
Whitworth, Mr. H. ... 54
Williams, Mr. Basil ... 464
Williams, Surgeon-General 355
Woodhouse, Surgeon-General T. P. ... 64

Younghusband, General Sir G. J. 357

PLACES.

Aisne Quarries 302
Alexandretta 345

Belgrade, American Hospital at 53
Blenheim Palace 68
Brighton Pavilion Hospital 69
Brockenhurst Camp Hospital 69

Cairo, Heliopolis Hotel ... 73
Carpathians 186, 409, 412, 418
Colesberg 142

El Kantara ... 323, 325

Festubert 211

Highgate, Queen Alexandra's Hospital at ... 71

Ismailia, Camp and Ferry near 322

Jaffa Market 332

Kolomea District ... 429

Le Touquet, Duchess of Westminster's Hospital 63

Mlava 172

Netley Hospital 80
Neuve Chapelle 385, 387, 388, 390, 391, 392, 393
Nile Barragh 336

" Plug Street " Wood ... 220
Port Said 329
Przemysl 190, 191, 193, 195

Ripple Vale, near Deal ... 126
Royaumont Abbey ... 42

St. Eloi 394
Shorncliffe, Canadian Hospital, Beachborough Park 72
Sinai, Mount, Convent at 326
Sinai, Peninsula 327
Suez Canal 324

Tussum 352, 353

Uzsok Pass 436

Waltham Cross, Manor House 126
Wilhelmshaven 96

Ypres ... 28, 33, 202, 232
Yser Canal ... 16, 24

MAPS AND PLANS.

British Army, Diagram illustrating Supply Service 301

Carpathian Passes ... 410
Carpathian Zone, fighting in the... 181
Cilicia and Northern Syria 337

Dniester and Pruth Area... 435

East Prussian Zone, Winter Operations in 188

France, Map illustrating Winter Campaign in 219

Lille District 383

Neuve Chapelle ... 380, 381
Neuve Chapelle to La Bassée 234

St. Eloi 399
Sinai Peninsula, Turkish Advance in ... 340, 341
Soissons 229
Submarines 86–90, 97, 99, 105, 115

Ypres, Battle of 20, 21

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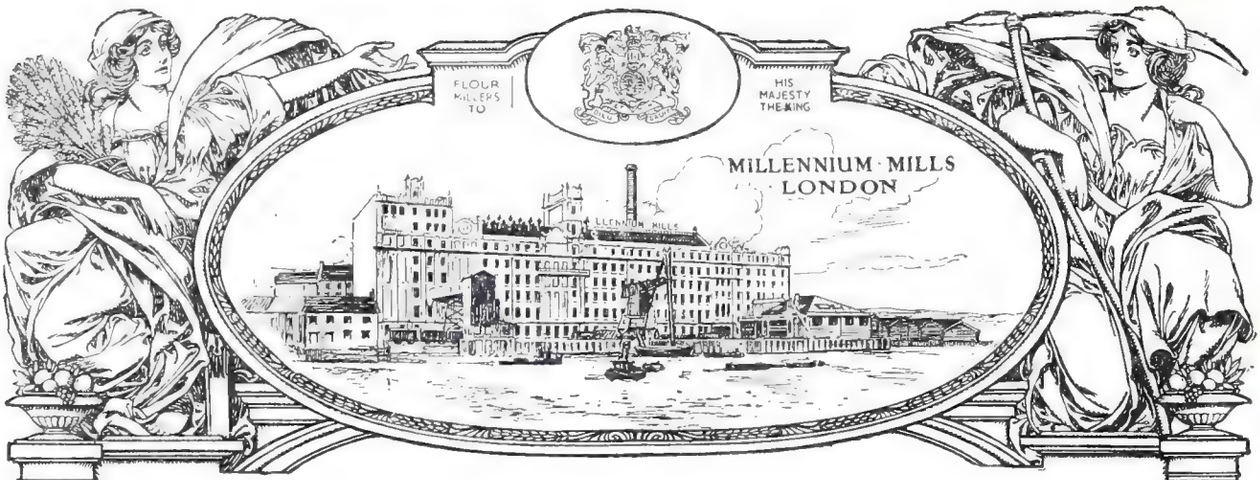

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